Clinical Lecture

ON THE

INTERDIAGNOSIS OF INSENSIBILITY FROM VARIOUS CAUSES.

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GENTLEMEN,—Questions somewhat of the following kind are likely to be put to you one day, and are full alike of clinical interest and medico-legal importance:—What is the matter with an individual who has been picked up on the road insensible, irrational, or inarticulate, and about whom no antecedents whatever are known? Is he ill, drunk, drugged, suffering from brain concussion, or from coma after an apoplectic or epileptic fit?

Syncope, trance, catalepsy, and coma are names severally used by medical writers to designate states of insensibility which the lay public group vaguely under fits.

Syncope is fainting; it may be otherwise described as a condition of body in which there is a death-like pallor, with loss of muscular power and of consciousness. Trance is a state of death-like faintness in which, however, some consciousness is retained, although the person is unable to move or speak. A faint is ordinarily (when an individual has not lost a very large amount of blood) an exceedingly transitory affair. A person collapses rather than falls to the ground in a faint; his knees bend under him, he subsides into the sitting posture, his head drops forward, and by the time the head has thus sunk to the level of the heart, or below it, the circulation through the brain becomes sufficiently restored for consciousness to return. In a faint a person seldom bruises his face. Upon waking up he may feel sick or giddy, or alarmed, but his brain resumes its thinking function usually at once and entirely.

In states of trance—of which I possess no personal experience, but may refer you to accounts to be read in Smith's "Forensic Medicine," pp. 540-542, and Forsyth's "Medical Jurisprudence," pp. 125-130, 155, and pp. 165-188—it appears that the body is to all appearance inanimate, and there is no power to move a muscle, the limbs meanwhile remaining perfectly flexible. The peculiarity attached to this condition is that the individual may hear, see, and remember all that goes on about him. There is no perceptible pulse or respiration, and hence trance has been mistaken for death, but we possess no recent or philosophical observations upon this form of faint. The recorded cases do not tell us of the temperature, or whether or not the muscles react to galvanic stimulus. Burial alive in this condition, except at sea, is highly improbable, but in no case would you be justified in making a post-mortem or consigning a body to burial unless you were satisfied from the presence of rigor mortis or appearances of putrefaction that death was actual. Catalepsy, again, is a rare inanimate condition; still I once had a case under my care which accorded well with the descriptions that have been given of it.

A young man of nineteen was picked up in Fleet-street insensible, not fallen, but standing stiffly, unable to move or to articulate. Here are the features that distinguish this state, all which he presented in other similar seizures which he had for several days afterwards while in the hospital. Thus while carrying something about, or sitting up in bed, or attempting to poke the fire, his eyes would suddenly acquire a fixed gaze, and he would remain arrested as it were in his act. We could set his limbs in any posture we pleased, and there he remained like a mesmerised cock, to the amusement of the nurses and other patients. I watched him on several occasions. There was not the slightest twitching or spasm of any of his muscles. His pulse was slow, and so were his respirations, his extremities cold and flabby, the axillary temperature remained natural. He would bear pinching or pricking without flinching, and took no account of our bawling his name close by his ear. There was no reason to think that he was feigning, and it would be difficult, I fancy, to feign and act a disease so well as he did. To quote from Dr. Copland's Dictionary, vol. i., p. 292: "The statue-like appearance and muteness of the cataleptic alone suffice to distinguish this disease. There is neither the lividity of asphyxia, the pallor and general flexibility of syncope, the stertor of coma, the paralysis of apoplexy, nor the movement and dreamy mental automatism of somnambulism."

Coma, however, because arising from very various causes, is the single one of the several states mentioned by them as likely to offer much difficulty in diagnosis. Coma may be due—1st. To *pressure* exercised on the brain, arising (*a*) from within the ventricles, effusion therein; (*b*) from depressed fracture; (*c*) from effusions outside the brain between hair and membranes. 2nd. To *alteration* in molecular state of brain from some concussion, contusion, bruising, œdema, apoplectic extravasation. 3rd. To brain poisoning by insufficiently oxidised blood, uræmic blood, narcotics, anæsthetics, inebriants.

I cannot give you certain symptoms for diagnosing each of these causes of coma, but I may aid you in excluding some of them, and thus help you to arrive at a correct diagnosis in particular instances. The profound coma produced by serous effusion into the ventricles of the brain, to judge from what I have seen in dropsy, renal or cardiac, and by what happens in tubercular meningitis, is gradually reached through a stage of sopor. The individual at first is sleepy, then dreamy and slow of apprehension, difficult to awake, and finally incapable of being roused at all. Reflex movements may be excited for a while, later the face is pale, the temperature falls. The breath is either Cheyne-Stokes or principally diaphragmatic and stertorous. At first there is power to swallow, afterwards acts of deglutition fail to be coördinated. The pupils are non-characteristic, but more often dilated than contracted. (*a*) The coma due to depressed fractures, or to effusion of blood or pus or fluid between the brain and the membranes, is as sudden in its advent as its cause may have been. Usually the breath is stertorous, the pupils are contracted, and the temperature is normal or above normal, the skin perspires profusely. No or only slight reflex response is made to galvanic or cutaneous stimulation.

You will be guided to the diagnosis of fractured skull by bleeding or oozing of bloody serum from the ear or nose, or by ecchymosis of the eye, and towards large apoplectic effusion of blood upon the surface of the brain by the stertor of the breathing and complete absence of reflex irritability. (*b*) When the coma is due to alteration in the molecular state of the brain, local contusion, or apoplectic extravasations, the face is usually pale, the temperature fallen below normal; the reflex irritability, although variable, is apt to be greater on one side of the body than on the other; the pupils may be unequal, and evidence of some hemiplegia is generally discoverable in muscles of the face or eye.

It seems like hair-splitting in diagnosis to dwell upon what may aid you to distinguish between coma due to general compression of the brain substance and coma due to more localised brain injury, with general circulatory and nutritional disturbance, but I give you the best clues I can, such as have served me sometimes well; the evidence of any hemiplegia in a case of profound coma is always in favour of localised injury of brain rather than of general pressure.

The coma may, however, be due to some brain-poisoning, the sources of which I have grouped under heading 3. Now, deficiency of oxygen and excess of carbonic acid in blood produces coma, as, for example, in the inhalation of laughing-gas or nitrous oxide, when the face is black, the veins turgid, the skin hot, the muscles irritable, and reflex spinal irritability is heightened.

Again, the blood-poisoning may be due to the action of some gas inhaled which interferes with or arrests the oxygen-carrying properties of the blood-cells. Sulphuretted hydrogen and carbonic oxide both appear to act in this way. The circumstances of the accident, the conditions under which the person was found, as well as some significant clinical appearances, already discussed by me, should facilitate the recognition of this source of coma. This blood change, if profound, is not recovered from.

Brain-poisoning and coma by anæsthetics and inebriants are usually detectable by the odour of the breath of the comatose person.

You may occasionally feel a little uncertain as between

apoplexy and dead drunkenness. We had an illustrative case the other day in our wards. A man who had been intoxicated by rum was admitted, and very profoundly comatose he was. No reflex movements were excitable; his face was cyanotic; there were gurgling râles in his throat, and I believe he might have died suffocated if I had left him in the position in which the nurse had placed him in bed, for he had a large tongue and uvula, with somewhat swollen and œdematous fauces; and as he lay on a flat bolster, with his head back, his tongue slipped back in his mouth, and nearly closed the opening of the glottis. Propping him up with a bed rest, and pulling his tongue forwards, his breathing quickly improved, and his face assumed a less blue colour. Still for some ten minutes I was unable to get any movement of either leg by tickling the soles of the feet, and the pupils were unequal, one rather smaller than the other, and both quite irresponsive to the stimulus of light. It was true he smelt of liquor, but he was quite properly admitted by the house-physician, since treatment and lapse of time alone could decide whether his coma was due to alcohol alone, or to disease *plus* alcohol. You may remember what I ordered in that case, as a piece of practice which is prompt, rational, and attended by no possible risks—the throwing up the rectum of a pint and a half of cold water, with a tablespoonful of common salt dissolved in it. It brought him out of his profound coma at once, for he asked for a night-stool almost directly afterwards. The stomach-pumping and belabouring with a galvanic battery of a comatose person, who may be the subject of gravescent apoplexy, belong to the surgery of the past, when active practice corresponded too closely with lynch-law-like punishment.

In every case of coma count the respiration, observe the quality of the breathing, and its ordinary effect upon the blood by the colour of the lips. Examine the pulse carefully for quality, frequency, regularity. Touch the eyeballs, examine the pupils for reaction to light, their condition—dilated, contracted, unequal, irregular; tickle the soles of the feet, to test what amount of reflex muscular action can be coördinated. The breathing in most states of coma is heavy and slow; notice if it be stertorous, Cheyne-Stokes-like, wholly diaphragmatic, or if the intercostals act. Next take temperature in the axilla or rectum. A remarkably low temperature, four degrees or more below normal, betokens usually uræmic coma, acetonæmia, or grave concussion of the brain. After epilepsy, apoplexy, intoxication, the temperature is more often normal, or even slightly above normal.

Uræmic coma will again be separately distinguished most often by some slight œdema of eyelids or extremities, wax-like pallor, bronchitic sounds, very foul breath, smelling of beef-tea; a brown furred tongue, pearly conjunctivæ, and dilated pupils bespeak urea poisoning. Diabetic coma is indicated by oppressed noisy breathing, effected by abundant muscular effort, but attended by some lividity in evidence of impaired oxidising changes at the pulmonary capillaries, of which we do not at present understand the exact cause.

In the coma that has succeeded an epileptic fit you may expect to find bruises, torn or dirtied clothes, indications of the tongue having been bitten.

Finally, the mode of recovering consciousness after intoxication differs much from what is observed in persons recovering from the coma that succeeds an epileptic fit. After intoxication I have noticed that while the sense of hearing is recovered soon, the lower attributes of mind, the sensorial instincts, reappear early, the individual who was comatosely drunk hears correctly before he sees correctly, and sometimes before he can stand. It is curious to notice the manner in which he repeats a word of your question over and over again, like a parrot, and perceive how some grotesque idea grows out of the jingle or jangle of a phrase mumbled over more or less thickly.

How differently do the mental faculties recover after brain concussion and commotion as after epilepsy. How the intellectually reduced "egomet" is in a dreamy state and staggers in his gait, hears questions put to him correctly, answers them articulately, apparently rationally, but having done so straightway forgets what he has said, cannot tell where he is or what he is or was doing. He is conscious of some confusion in his own memory, and shows often some high measure of judgment in his distrust of himself, and says: "I cannot recollect where I was going."

Intellectual wholeness or sanity lies outside to-day's lecture, and I mention this merely as a clue to past coma, whether from drink or cerebral commotion.

It remains for me to point out the distinctive features of opium coma. There is profound stupor, with closed eyelids, contracted pupils, upturned eyeballs; the face is pale, the skin cool, clammy; the forehead beaded with heavy perspiration; the limbs are lax, but, for a while, reflex motions are readily excited. The respiration now slackens, falls in frequency, perhaps, as I have seen it do, to as low an ebb as 6 per minute, the pulse remaining fair at 80. The coma now is very profound; you may prick, stimulate by galvanism, call, flick, stimulate by what means you please, little or no further purposive response is returned by coördinated muscular movements. The body will not walk; it is only dragged about, if the advice given has been to walk the man about. Next the lips get livid; the surface of the body colder; the breath is sobbing, and at long irregular intervals; the pulse hardly to be felt at the wrist, and death is imminent by asthenia or sudden failure of the heart's action. Now for what may you mistake this coma, and what may be most easily confounded with it? Apoplexy into the pons Varolii, since, as was pointed out long since by Dr. Wilks, who illustrated the fact by several examples of cases that had fallen under his observation, apoplexy into the pons is attended by great contraction of the pupils.

If, then, in any case of profound coma, with extremely contracted pupils, you suspect opium to be its cause, but have no corroborative fact, no laudanum bottle, no opium-smelling substance, or mark of subcutaneous morphia syringing upon the body, or soot of opium-smoking inside the nostril to aid you, remember that the case may still be apoplexy into the pons, a source of coma not likely to be benefited either by bastinado, beating with towels, walking about, or all the extracts of coffee which can be pumped into the body at either extremity.

Clinical Lecture
ON A
CASE OF STRANGULATED HERNIA.

Delivered at Westminster Hospital

BY GEORGE COWELL, F.R.C.S.,
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GENTLEMEN,—The patient, Richard M——, whose case I bring before you to-day, was admitted into Northumberland ward on Wednesday, May 5th, with urgent symptoms of a strangulated left oblique inguinal hernia. He is a spare, thin, nervous-looking man, forty-two years of age, and by occupation a groom. The history that he gave was this. The hernia first appeared in the left groin about twenty years ago, coming down suddenly whilst he was jumping a fence. The size of the rupture was described as that of a pigeon's egg, and the patient succeeded in reducing it himself about four hours after it had appeared. He was very properly advised to get a truss, and he seems to have worn it for about six months, when he left it off, supposing that his rupture was cured. The fact that the hernia did not return for nine years shows the immense importance and advantage in such cases of the immediate application of a properly-fitting truss. On its recurrence after this interval the patient states that he again succeeded in returning it, and that he resumed his truss. About two years ago the breaking of his truss led to his discarding it, and shortly afterwards the hernia came down whilst the patient was riding, and this time he failed to reduce it. He was admitted into the Great Northern Hospital, where he remained for three days. All attempts to reduce the hernia failed, and symptoms of pain and vomiting rapidly ensued. However, on the third day, when in a warm bath, the patient succeeded in reducing the hernia himself, and the symptoms ceased. His truss was repaired and resumed.

About the same time a small, easily-reducible hernia, appeared in the right groin.

On the morning of the 5th of May the left hernia came down, the patient says, without any straining or exertion, and a few hours before midnight he presented himself at the Westminster Hospital with a large inguinal hernia of the left side, with some symptoms of strangulation, considerable abdominal pain, and vomiting. The house-physician, who was acting for the house-surgeon, placed the patient in a warm bath, and reported that whilst applying the taxis he felt something go up, but found it impossible to reduce the bulk of the rupture. The patient was put to bed, an ice-bag was applied to the tumour, and two grains of opium administered. The pain, however, continued during the night, there were great restlessness and continual retching and vomiting, and at 7 o'clock the next morning (June 6th) I was called to the case.

The face of the patient then presented an expression of extreme anxiety; the pain appeared to be intense in the neighbourhood of the inguinal canal and about the umbilicus. The rupture itself was soft and doughy, and evidently the greater part of its contents was composed of omentum. This fact was made out more fully when the patient had been placed under the influence of ether, and as it was found impossible to reduce the size of the tumour by the taxis the operation was proceeded with. The incision was made over the neck of the sac; the coverings of the hernia, which were very thin, were opened in the usual way, and the seat of stricture was divided. Still no return of any of the contents of the hernia could be effected, and it was found necessary to open the sac. There was no fluid in the sac, and no intestine to be seen. At the neck of the sac, however, was a very small portion of intestine, which at once slipped through the constriction on the pressure of the finger introduced into the sac. All the rest of the contents was omentum, a small portion of which was adherent to the interior of the sac. It was found impossible to return more than a very small part of this omentum, and it was removed, with the exception of a small portion that was adherent. This was left in the hope that it might form a plug for the sac. The plan adopted for the removal was the application of a number of catgut ligatures (six) to the various portions of the omentum; the mass was then cut off, and the stump of the omentum gently passed in detail within the abdominal cavity. The wound was closed with three sutures, and dressed with lint dipped in carbolised oil, and the usual pad and bandage were applied. The patient was then placed in bed, and was ordered to take fifteen minims of tincture of opium every four hours. He had ice to suck, and later, beef-tea was administered, a teaspoonful at a time. Throughout the day he was free from his previous symptoms.

May 7th.—The patient had passed a somewhat restless night, and this morning there had been some return of the retching. There is slight tympanites. The temperature is normal. Effervescing mixture with dilute hydrocyanic acid was given in addition to the opium.

The retching, with occasional vomiting, continued for several days. On the 10th a small hernia was discovered at the umbilicus, the patient having called attention to pain which had come on during the night whilst vomiting. He stated that he had previously had a similar hernia at the same spot. It was not strangulated, as it could be emptied, but it could not be reduced until two days later. Meanwhile the restlessness and vomiting increased, delirium came on, and it was with great difficulty that the patient could be kept in bed. There was no increase of the tympanites. Hypodermic injections of morphia were substituted for the opium, and on the 11th a turpentine enema was administered. This was followed by a moderate evacuation from the bowels, the first since the operation. The symptoms did not cease until about six hours after the reduction of the umbilical hernia on the 12th. From the cessation of the vomiting the patient made an uninterrupted recovery. He was not allowed to take solid food until the 21st, the fifteenth day after the operation, by which time the wound was almost healed. He has now been furnished with a well-fitting double truss, and leaves the hospital to-day (June 10th).

There are several points about this case which are both interesting and instructive. The rapidity with which the symptoms of strangulation showed themselves on more than one occasion, and the extreme severity which these symptoms assumed within less than twenty hours of the reputed descent of the bulk of the hernia, are fortunately not very frequent, and would seem to depend upon the existence of a temperament of extreme nervous irritability; but when severe symptoms do rapidly occur, they must be met with a similar promptness on the part of the surgeon. Many more lives are lost by postponing the operation too long than by an undue haste to perform it. When once the surgeon is convinced that a hernia is strangulated, and that he cannot reduce it by ordinary means, every hour that the operation is postponed increases the risk of the patient. There is one class of cases, however, where great care is required lest an operation be too readily and needlessly undertaken; I mean in cases of inflamed herniæ. It must not be forgotten that all or most of the symptoms of strangulation may be produced by the presence of inflammation in a hernia, and even by enteritis. In the former case the hernia would be tense, painful to the touch, and irreducible; and the latter condition might coexist with an irreducible hernia. The symptoms in both cases might, without care, be taken for symptoms of strangulation, and operative interference would almost certainly be attended by a fatal result. In the present case inflammation was certainly not the cause of the symptoms; the hernia had been down too short a time, and showed neither tension nor tenderness.

Although the bulk of the hernia was omentum, still the severity of the symptoms rendered it probable that some portion of intestine was strangulated. I remember a case that was under my care in Queen Anne ward ten years ago, and which is reported by Mr. Holthouse in his book on "Hernial and other Tumours," where the patient, aged seventy, had an old irreducible femoral hernia, composed chiefly of omentum, but who died (she refused to be operated upon) with a strangulation of an exceedingly small knuckle of intestine which had found its way into the neck of the sac. This proved to be the case in the present instance, and it is probable that the shape of the omental mass rendered all attempts to reduce the strangulated intestine nugatory until the sac was opened and the finger could be passed within it to its neck.

The manner of dealing with the omentum was perhaps novel. The usual plan is to apply a ligature round the mass, and by means of it retaining the stump in the neighbourhood of the inguinal canal when it has been reduced, in order that the discharge from it may escape by the wound, and that it may form a permanent plug. Instead of this, I tied the omentum piece by piece with several ligatures of carbolised catgut, cut them off short, and trusted to the portion which was adherent to the sac, and which I did not interfere with, to retain the stump of omentum, or at all events one end of it, in the neighbourhood of the inguinal canal. This plan appeared to be more suitable in the present case, and certainly the omental vessels were more effectually secured separately. It is too soon to say if the result will be the obliteration of the sac by inflammatory adhesion, but at present there seems to be a firm cord occupying the position of the sac.

The remaining point of interest to which I will allude was the presence of three herniæ in this patient, and the complication which the occurrence and difficulty of the umbilical hernia produced during the progress of the case. It is difficult to say in what proportions the inflammation of the portion of intestine which had been strangulated, the subacute peritonitis, and the umbilical hernia severally contributed to maintain the retching and vomiting that recurred twenty-three hours after the operation, and persisted for so many days. The first two conditions probably were the primary cause of that recurrence, but there is no doubt that the delay in reducing the small umbilical hernia was a very material element in the persistence of those disagreeable and dangerous symptoms.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Miss Jessie Landseer, late of Kensington Park Gardens, bequeathed £100 each to St. Mary's Hospital, the Brompton Consumption Hospital, the Middlesex Hospital, the Metropolitan Free Hospital, the Hospital for Sick Children, Great Ormond-street, the West London Hospital, the Westminster Hospital, the London Fever Hospital, the National Hospital for the Paralysed and Epileptic, the British Home for Incurables, and the Royal Hospital for Incurables. The Goldsmiths' Company have given £50 in aid of the funds of the Royal Hospital for Children and Women, Waterloo-road. The Mater Misericordiæ Hospital, Dublin, becomes entitled to a sum of £375, and £175 yearly, by the will of the late Very Rev. Anthony Magee, of the Priory, Clifden, Co. Galway.

ON "TENDON-REFLEX" AS AN AID TO DIAGNOSIS IN DISEASES OF THE SPINAL CORD.[1]

BY THOMAS BUZZARD, M.D., F.R.C.P.,
PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

(Concluded from p. 844.)

WE have now to suppose the case of the patellar tendon-reflex being absent in a patient who is either entirely confined to his bed or only able to walk with some difficulty. The quadriceps extensor is found more or less wasted, we will say, its response to induced currents being either below the normal standard of excitability or lost altogether. In the latter case there will be inability to contract the muscle by voluntary effort. Such a condition necessarily indicates that the muscle is cut off to some extent by some means or other from the trophic influence of the spinal cord. The seat of this influence is known to be in the large ganglion-cells which lie in the anterior horn. Now, it will be seen, if we look at the diagram (Fig. 3), that the interruption in this case may exist either in the anterior root outside the cord, the short portion of it within the cord, or in the anterior horn of grey matter itself. As regards the second of these possibilities, nothing is known for certain that will enable us to localise lesion in that particular portion of the anterior root. For the rest, absence or marked decrease of reflex, along with muscular wasting and loss of faradaic excitability, may be caused by neuritis of a mixed spinal nerve, or it may result from spinal meningitis, involving the anterior roots either alone or in conjunction with the posterior roots. The precise cause for the interruption in such a case can only be determined by the consideration of collateral circumstances, into which I need not enter at length. It may be remarked, however, that if the symptoms described are accompanied by pain and tenderness in the nerve trunk, and some cutaneous insensibility, this sensory disturbance makes it evident that the cause of interruption is in the mixed nerve (in which the motor and sensory roots are combined), and not in the anterior (motor) root alone. I have recorded cases of neuritis in which marked decrease of tendon-reflex occurred in these circumstances.[2] All that is sure from percussion of the tendon and examination of the muscle is that a break exists somewhere on the *motor* side of the nervous arc. Nor may there be anything in the condition of the muscle in such a case to distinguish it from that which obtains when the break in the nervous arc is brought about by atrophy of the large ganglion-cells in the anterior horn. In the rough diagram (Fig. 4) it is seen that the line, indicating the nervous arc, passes through an anterior horn which is shrunk and atrophied, and in which there is but little trace of ganglion-cells to be observed, in striking contrast to the number and size of those in the anterior horn of the other side. In this shrunken anterior horn, then, the "fault" occurs which causes absence of tendon-reflex. Now atrophy of the ganglion-cells of the anterior horn occurs in various conditions. It often happens as part of a diffuse myelitis, involving not only the anterior horn, but more or less completely the whole transverse section of the cord. In the acute atrophic paralysis of infants and adults (polio-myelitis anterior acuta, commonly called infantile paralysis), there is acute myelitis, which is practically confined to the anterior horn of grey matter. In this disease the loss of faradaic excitability of the muscles is very constant and marked. In the chronic malady, however, in which the same structure is affected (progressive muscular atrophy, protopathic amyotrophy—Charcot), it is somewhat remarkable that, as Duchenne has shown, no decrease of faradaic excitability is to be noticed in the muscle. (This is no doubt the rule, but I have seen exceptions to it.) In the former case apparently a mass of ganglion-cells is suddenly, or at least very rapidly, subjected to a change which arrests their function, and which is followed by atrophy of more or less of their number, of which a varying proportion recovers. In the latter disease it would seem as though, in consequence of a slowly creeping lesion, the ganglion-cells atrophied gradually, leaving those of them which are spared unaltered, or at least with their function unimpaired, until they in their turn are invaded and destroyed. The relation of tendon-reflex to progressive muscular atrophy is a good deal complicated by the circumstance of there being at least two classes of this affection—the protopathic amyotrophy and the deuteropathic amyotrophy of Charcot. In typical cases the former is a very slowly progressive muscular atrophy, the gradual loss of power of the patient being in proportion to the extent to which the anterior horns of the cord have been invaded and the muscular system correspondingly atrophied. The latter begins with loss of power (paralysis) independent of muscular atrophy, and is succeeded by a rapid muscular wasting of some or all of the muscles previously paralysed. It is this form which tends to extend into the medulla oblongata and to occasion death by destruction of the ganglion-cells essential to life, which are continuous upwards with those of the anterior horns of the spinal cord. The duration of this form is much shorter than that of the other. In the protopathic form the tendon-reflex may exist, to some extent at least, for a certain time, to be lost, however, when the atrophy has advanced, so that it is impossible to say that the behaviour of the tendon-reflex is at all characteristic. The break which causes its absence in such a case is in the anterior horn, as in Fig. 4.

FIG. 3.

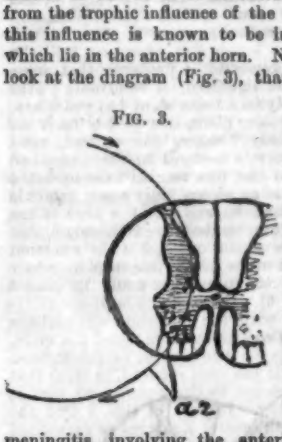
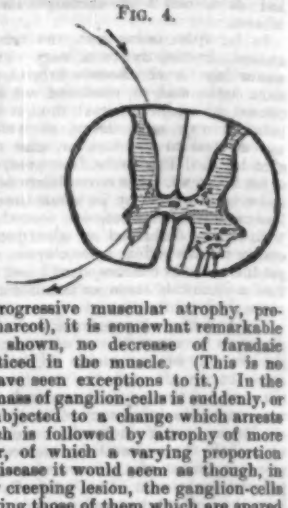
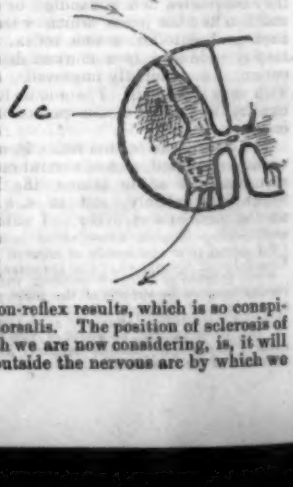


FIG. 4.



The condition of the tendon-reflex in the deuteropathic form is extremely interesting. Before considering it, however, I should like to draw attention to Fig. 5. In this diagram there is a rude representation of sclerosis of a lateral column of the spinal cord. In a previous diagram (Fig. 2) the position of sclerosis of the posterior root-zone was indicated. It was shown that if the afferent fibres from the tendon go, as we believe they do, with the sensory roots, they pass through the outer part of the posterior column, and consequently are exposed to a lesion which produces atrophic changes in them. The nervous arc is therefore "cut" at this point, and that absence of tendon-reflex results, which is so conspicuous a feature of tabes dorsalis. The position of sclerosis of the *lateral* column, which we are now considering, is, it will be observed, altogether outside the nervous arc by which we

FIG. 5.



[1] In the preceding portion of this paper, published last week, I referred to a case of hemi-paraplegia under the care of Dr. Ramskill, and after mentioning that there was paralysis with extensive wasting of the *left* lower extremity, and anæsthesia (without any motor complication) in the *right* lower extremity, I went on to state that the patellar tendon-reflex was absent in both legs, and attributed its disappearance in the right limb to the fact that the lesion of the cord, although probably to a large extent confined to the *left* segment, was not absolutely so. I thought that it encroached a little upon the right half of the cord, far enough to interfere with the integrity of the grey matter to a certain extent without affecting, however, the anterior horn. I ought to have mentioned that this view, which appears to me to be necessary in order to explain the break in the nervous arc subserving patellar tendon-reflex in the *right* limb, is supported by the existence of a patch of cutaneous anæsthesia, about eight inches by four, in the neighbourhood of the *left* great trochanter.

[2] THE LANCET, April, 1879.

suppose the stimulus from the tendon to the muscle to be transmitted. We should expect, therefore, to find that in sclerosis of a lateral column the tendon-reflex would not be absent. And that is the case. The tendon-reflex is never lost as a result of uncomplicated sclerosis of a lateral column.

So far from being lost, the tendon-reflex is indeed increased, frequently to a very surprising extent. Ankle clonus (also knee clonus—Erb, Gowers, Waller) may be, in these circumstances, produced not only (in the case of ankle clonus) by sudden dorsal flexion of the foot,[2] but by the patient's own movements, as well as by light blows on various structures (bones, muscles, tendons), and sometimes even by the slight vibration produced by an accidental jar of his bedstead. This excitability to various kinds of stimulation is, however, by no means constant. One sees in certain cases of lateral sclerosis something like the converse of what I have described as occurring in tabes. There is excessive tendon-reflex, knee clonus, as well as ankle clonus, yet the muscles concerned will not respond to a blow, and need a distinctly stronger faradaic current than in health to cause their contraction.

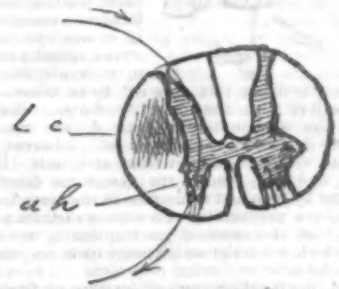
The question of prognosis is so mixed up with that of diagnosis in regard to the occurrence of ankle clonus, that the two may be considered together. The facts appear to show that in all cases the occurrence of increased tendon-reflex in anything like a marked form signifies that from some cause the inhibitory influence of the higher centres is no longer being normally excited. It always means apparently that something has come in the way (at some point or other) of the natural propagation of nervous impulses from above. It is generally accepted that impulses from the highest centres (so-called volitional impulses) travel to the ganglion-cells of the anterior horns by the antero-lateral columns of the cord (pyramidal tracts). The fact that by what is commonly called "an effort of the will" we can control to a certain varying extent the reflex actions which are subserved in different parts of the cord would seem to show that in all probability the restraining influence which is continually and unconsciously being exerted over certain spinal reflexes in a state of health is conveyed by this same channel.[4] Now it is when these (antero-lateral) columns are most extensively invaded by sclerosis, that is to say, when the resistance to the propagation downwards of nervous impulses from above is greatest, that we obtain the most marked ankle clonus. When there is a history pointing to myelitis at some portion of the cord, followed by a more or less pronounced rigidity of the limbs, with excess of tendon-reflex which has existed for some considerable time, say upwards of a year or two, we shall hardly be wrong in assuming that a change has taken place in the lateral columns which is likely to be permanent. And so also in reference to the like symptoms often consequent upon an attack of hemiplegia. An excess of reflex combined with more or less rigidity of the limbs, if it has lasted for months, may be considered as indicating a structural change in the lateral column which is unalterable. But this is by no means the case when the symptoms have not been of long standing. I have under my care at the present time in hospital a young woman who came in last June on account of paraplegia of ten months' duration, referable, as it seems, to a subacute myelitis in the dorsal region of the cord. On admission there was such a spastic condition of the legs that they contracted when handled or upon any attempt being made to flex the joints, which were stiff. There was great excess of patellar tendon-reflex, and ankle clonus was readily produced in a marked degree in each foot. The patient has gradually improved. She can stand and walk with very little help. There is no longer any marked spastic rigidity, and ankle clonus cannot now be obtained in either foot.

In hysteria the tendon-reflex is, so far as I have yet seen, usually increased, and in several cases I have witnessed the occurrence of ankle clonus, the possibility of producing which has entirely, and in one case suddenly, ceased on the patient's recovery. I submit that this fact is an extremely important one in reference to the causation of the phenomenon. There would seem to be but little doubt that in hysterical paraplegia the cerebral influence which is propagated downwards in health by the antero-lateral columns of the cord is more or less in abeyance. It may be suggested that the reason why an hysterical girl does not walk is because the nervous impulses from above, which ordinarily act upon the various spinal centres for progression, do not arrive there. The absence, then, of impulses downwards through the lateral columns seems to result in an effect upon the tendon-reflex which is very similar to that occasioned by the resistance to their propagation through the columns which is interposed by the structural change occurring in sclerosis.

It is necessary to remark, then, that the existence of ankle clonus cannot be considered conclusive evidence of a structural lesion of the spinal cord. It may be, to use a term which is generally understood, although scarcely capable of exact definition, "functional." I have never seen, however, in a case of hysteria an excessive degree of ankle clonus. The automatic flexion and extension movements of the foot will go on for perhaps a dozen times, becoming gradually weaker, and ceasing spontaneously.

The behaviour of the tendon-reflex in deuteropathic amyotrophy (lateral amyotrophic sclerosis) is important. Even when the disease is tolerably far advanced, and a good deal of atrophy of the muscles has taken place, it will be often found that the tendon-reflex not only remains, but may be in some excess. I have a patient now under observation who presents a typical example of the disease. He cannot stand without help, and the muscles of his thighs are not only much wasted, but their faradaic excitability is diminished, and they hang flabbily from his bones. Not only is the patellar tendon-reflex, however, in excess, but there is some ankle clonus occurring when he plants his foot in certain positions. I would suggest the following as an explanation of such cases as these (Fig. 6). So long as a certain number

FIG. 6.



of ganglion-cells remain intact in the anterior horn the nervous arc (for tendon-reflex) is complete. Now, if the lateral columns were sound, the inhibitory influence from above transmitted by them would be potent enough to hold the reflex, in its necessarily diminished strength, in complete restraint (as, for example, in infantile paralysis), and no response would therefore occur to a blow on the tendon. But the lateral column is diseased; the check is consequently removed, and the reflex manifests itself often with great energy. As a matter of course, however, it is not so strong as in that form of lateral sclerosis which is unattended by muscular atrophy.

In an earlier part of this paper I have remarked that the response of the quadriceps to a blow on the patellar tendon "*almost always* signifies that the nervous arc is not seriously interrupted in that part of the spinal cord which gives origin to the lumbar plexus." In such a case as we are now considering (lateral sclerosis with muscular atrophy), it is evident that now and then the tendon-reflex may be apparently normal, and yet the spinal cord at the part which is concerned be affected with atrophy of some of the ganglion-cells in the anterior horn. The defect in the reflex mechanism is, as it were, just balanced by the defect in the mechanism which restrains reflex. It is necessary to bear this possibility in mind, in order to avoid an error, which, however, a little inquiry into the collateral circumstances will easily prevent.

[2] I would refer to a lecture of mine in THE LANCET, Aug. 10th, 1878, for a detailed description of this phenomenon.

[4] Dr. Hughlings Jackson believes that the rigidity in hemiplegia results because by atrophy of the fibres of the lateral column of the cord "cerebral influence" is taken off from the anterior horns, and thus the "cerebellar influence" upon them is no longer antagonised. On this principle, too, he would explain the increased tendon-reflex in cases of hemiplegia; *mutatis mutandis*, as regards lesions taking off the influence of the cerebellum.

ON CHIAN TURPENTINE AND ITS USELESSNESS IN CANCER.

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(Concluded from p. 846.)

CASE 5. *Carcinoma of uterus and vagina; death.*—Janet M——, aged sixty-five, was admitted to Stafford ward, June 24th, 1880. A widow and the mother of seven children, the youngest thirty-five, the eldest forty-five; five born prematurely; no miscarriages; catamenia commenced between thirteen and fourteen, always regular till fifty-four. General health always good. No cancer in family. About twelve months ago she noticed a little hæmorrhage, which recurred from time to time, but never in great quantity. Has not markedly lost flesh. Was operated upon at Soho-square Hospital in January, 1880. Thinks chloride of zinc was applied. Became an out-patient at the cancer department of the Middlesex Hospital on April 15th, and continued till admission on June 24th.

Vaginal examination.—Os and greater part of cervix quite gone, and in their place a large, irregular, horny ulcerated growth, with indurated edges, which extends a little way along the posterior wall of the vagina, and further still along the anterior wall. The upper part of the vagina, where it joins the back of the uterus, gives to the finger the impression of a deeply-excavated, irregular chasm. Discharge abundant, offensive, and watery. Is a very emaciated woman, with pinched look, but no marked cachexia. Spirits good; sleeps well; appetite fair; bowels very confined; micturition sometimes difficult, but never very painful. Suffers but little pain.

She was at once placed upon the Chian turpentine mixture, taken three times a day. This was continued up to the 21st of August. During the first week in September there was diarrhœa. On September 7th the Chian turpentine mixture was resumed, and taken, with occasional intermissions, till a few days before death, on November 4th. From the end of September she suffered a great deal, owing to a fistulous communication between the rectum and vagina. Her distress on this account was, however, in great part relieved by injections of warm water, used daily, with the object of keeping the parts around the fistula clean. Occasionally antispasmodics and aperients were required in addition to the turpentine. Throughout opium pills were required at night occasionally; but during the last six weeks of life they were given at intervals during the day as well as at night.

Necropsy, by Dr. FOWLER, *fifteen hours after death.*—Body very emaciated, abdomen retracted. No recent peritonitis. The uterus was almost entirely destroyed by cancerous ulceration, which extended down the vagina to within one inch and a half of its orifice. The rectum had been opened about two inches and a half from the anus by extension of the ulceration. The bladder was not invaded, and was normal. The kidneys were normal, as were the other organs.

CASE 6. *Cancer of the uterus; death.*—Sarah Jane D——, aged forty-seven, a widow, mother of eight children, and engaged as a mission woman. Applied to the cancer out-patient department on April 22nd. She had suffered from occasional pain and discharge for two years and a half. Since December, 1879, has had a constant watery discharge, much pain, and from time to time flooding.

She was treated by tonics, anodynes, and disinfecting injection until May 13th, when Chian turpentine mixture was commenced. At this time ulceration of the os and cervix uteri was well marked, and she had a great deal of watery discharge.—July 1st: Still continues taking the Chian turpentine. There is now a clean, but irregular, ulcerated surface, with indurated edges. She complains much of pain in the right groin, but has had no flooding and much less discharge. One evening shortly after this visit, having felt pretty well and in good spirits during the day, she suddenly called for the assistance of a neighbour on account of a profuse flooding. From this time she was obliged to keep the house, rapidly became weaker, suffering agony up to within a week of her death, and died at the end of last August.

CASE 7. *Cancer of uterus, with profuse flooding.*—Elizabeth R——, aged thirty-eight, married, applied to the cancer out-patient department on June 10th. She had been ill nine weeks, and during that time had so frequently flooded, that on her appearance at the hospital she was reduced to extreme weakness, and presented a most marked bloodless appearance. She also complained of great pain in the back. There was a large sprouting ulcer involving the os and cervix of the uterus. She was anxious to know if she could safely take the journey to her dying husband in Germany, but her condition was so grave that I was compelled to forbid this, fearing at least that the effects of seasickness would be absolutely fatal.

She was treated with a mixture of ergot and cinchona, a morphia pill at night, and a belladonna plaster for the back. Under this treatment the bleeding stopped, and as a result she improved greatly in strength and looks.—Sept. 2nd: There has been no bleeding for some weeks, and there is but little discharge. She is altogether improved. Chian turpentine mixture was now ordered.—Oct. 7th: Has continued the turpentine for five weeks. The uterus is hard and enlarged, the os and cervix are at least five times larger in diameter than normal.—Nov. 11th: Is still under the Chian turpentine treatment, but there is no improvement in the state of the uterus. Her condition is extremely bad.—Nov. 22nd: Has been admitted to Stafford. The greater part of her vagina is filled with cancer growth.

CASE 8. *Cancer of the uterus, extending to the rectum.*—S. P——, aged fifty, the mother of ten children, came under treatment at the cancer out-patient department on June 24th, 1880. The os and part of the cervix uteri had disappeared. There was a wide irregular ulcer with thick edges, and surface crossed by hardened ridges; the posterior wall of the vagina at quite its upper part was thickened and deeply ulcerated. Her chief trouble was difficulty in defecation. Symptoms began with flooding and pain in April, 1880.

She was at once put upon the Chian turpentine mixture three times a day. There was flooding from the 10th to the 15th of July, and an excessive offensive watery discharge; constipation also troublesome. Sept. 9th: Flooding has been severe for fourteen days; suffers from frequent severe pains in the legs and pains of the character of labour-pains. Considers herself better for the mixture, and says she would be sorry to be without it.—Sept. 30th: Has taken the Chian turpentine regularly three times a day up to this date. Her sufferings are severe. To-day ordered Haust. Caryophilli Co. et Morphiæ twice a day, and to continue the Chian turpentine mixture twice a day.—Nov. 18th: Has continued the same treatment since September 30th, but she is much weaker, has shortness of breath and a cachectic look; is very anxious to be admitted, as she is unequal to her work. The vagina is thickened, and its lumen contracted about the middle by deposit in its walls; beyond the contraction is an ulcerated cul-de-sac. The fundus uteri is much enlarged and very hard. *Per rectum*, uterus is found greatly enlarged, hard, and irregular; there is infiltration of the anterior rectal wall and incontinence of fæces.

CASE 9. *Ulcerated scirrhus of the breast; death.*—Eleanor S—— was admitted into Stafford ward on Oct. 15th, 1879, with an ulcerated cancer of the left breast. Married, but sterile. General health good. No cancerous history. Disease began about four years ago as a small lump the size of a marble in the outer side of the left breast; it gradually increased, and after twelve months the skin became affected, then ulcerated. The tumour discharged and then shrank, but cancerous infiltration extended up to the axilla. More or less pain suffered.—April 2nd, 1880: There is a large foul ulcer with induration around; the pain neither continuous nor severe. Chian turpentine pills were commenced, all other remedies being discontinued.—April 13th: No appreciable change.—16th: The discharge is greater in quantity, offensive, and not altered in character.—27th: Breast seems, on the whole, worse than formerly. There is more discharge, and some bleeding occurred this morning.—May 26th: Discharge considerable and offensive, pain severe.—June 10th: Had a fit this morning, attended with unconsciousness, sickness, and twitchings of the muscles of the face. It did not last long. Chian turpentine was continued regularly up to the first week in July, subsequently only at intervals and

loss frequently. The disease slowly progressed, and she died, exhausted, on Sept. 11th.

CASE 10. *Ulcerated scirrhus of the breast; cicatrisation.*—Sarah W——, aged fifty-nine, a widow, applied at the cancer out-patient department on April 15th, 1880. Is a large-framed, stout woman, and the mother of four children. The cancer began as a tumour of the right breast five years ago, and after slowly increasing for two years ulcerated. When first seen there was a large circular ulcer, with thickened edges and foul, greyish, discharging base, in the sternal half of the mammary region, the remaining part of the mamma prominently enlarged. The ulcer is prone to bleed considerably at times, and she often suffers severe pain. A lotion of carbolic acid as a wash, a saturated solution of alum to be used if necessary to stop hæmorrhage, and the Chian turpentine mixture to be taken three times a day, were ordered.—April 22nd: She describes herself as having had no pain since commencing treatment.—July 8th: There has been a distinct improvement since she has been under treatment. There is much cicatrisation at the edges, and a healthy, purulent discharge from the surface of the ulcer.—Oct. 7th: A wide border of cicatricial tissue surrounds the ulcer, but in and beyond the cicatrix there is a ridge of indurated tissue due to fresh infiltration. There has been a diminution in the size of the remaining portion of the breast.—Oct. 21st: There has been more hæmorrhage again this week; continues with the turpentine mixture. She is still under treatment, but there is no further change.

Remarks.—If I had not seen cases of this sort before, I might certainly have believed that the turpentine had caused the cicatrisation.

CASE 11. *Ulcerated scirrhus of the breast; death.*—Mary Sarah R——, aged forty, widow, mother of three children, applied on July 22nd at the cancer out-patient department for ulcerated scirrhus of the left breast. Disease began three years ago as a small lump in the mamma, to the inner side of the nipple. When first seen there was a wide and offensive ulcer, involving the inner half of the breast. Nipple present and not retracted, the axilla stuffed with enlarged glands. On September 2nd she commenced the Chian turpentine mixture three times a day.—Sept. 9th: She considers herself better for the mixture. The whole surface of the wide, saucer-like excavation is covered with yellow felt-like secretion. She continued to decline, and on Oct. 21st was too ill to come and see me, but sent for more medicine. A few days later I heard of her death by letter.

CASE 12. *Nodular and rapidly-ulcerating scirrhus of the skin of the mamma.*—Mary Ann Y——, aged fifty, applied at the cancer out-patient department on Sept. 16th, with cancer of the skin over the right breast. Married, mother of five children, and had had four miscarriages. A stout, intemperate-looking woman; disease is said to have begun in March, 1880. When first seen there was a very large and wide area of ulceration, in patches, on the surface of a large and pendulous breast. Beyond this area there were several small pea-sized nodules (in places running into one another) in the skin, some of which were breaking down into circular, punched-out ulcers. The undestroyed skin between the ulcers was of a bright-red colour. A worm-eaten aspect was thus given to the parts. She used stramonium ointment and took quinine up to Oct. 7th, when the Chian turpentine mixture was commenced.—Oct. 21st: The number of cancerous warts has increased, and are spread over a wider area; fresh ulcers have formed by the breaking down of the warts, and present an ashy-grey slough at their base. A cuirass-like thickening is detected in the skin of the other breast. Eczema below the right breast, probably excited by the foul discharges. The stramonium ointment again resorted to on account of the severe pain, and a pill composed of two grains of extract of conium and three grains of extract of hyoscyamus to be taken every night, and in the daytime also if necessary. Chian turpentine continued.—Nov. 11th: The disease is still spreading widely; now around to the back upon the right side, as well as across the sternum over the left breast. There is a most offensive, loathsome odour with the discharge. Suffers much, and is very feeble: says she can no longer take the turpentine mixture, as it makes her sick, and begs to be put again upon the quinine treatment.—Nov. 18th: So ill, and altogether in such a bad condition, that she has been admitted to-day into Bird ward, instead of awaiting her turn for the cancer wards.

Of the foregoing cases eight are of the female genital organs, and four of the breast. Of the eight uterine cases five are dead, two are known to be extremely ill, and one after a short trial of the turpentine declined to continue taking it. This last is the only case in which the turpentine was not taken for several weeks in succession. Of the four breast cases two are dead; one is in the hospital, with the disease very rapidly advancing, and will probably not live many weeks; and the fourth is of that somewhat rare and chronic variety of scirrhus which, after ulceration, cicatrices, whilst fresh cancerous material is deposited in and beyond the cicatrix.

I might add notes of several other cases, both uterine and mammary, in which the turpentine has been given for many weeks, and even months, together, but without benefit.

I am not able to report that there is a single symptom over which the drug seems to exercise even frequently, not to say constantly, an influence. It cannot be relied upon to assuage pain, to diminish or alter the character of the discharges, to check hæmorrhage, or promote the destruction of the growth by ulceration or sloughing. In the few cases in which the patient at first thought she was benefited, the impression was due to that "clutching at straws" tendency, that is so often observed in persons suffering from lingering and incurable disease, and to her being encouraged to think that she was taking a new and certain cure. Rest, regulation of diet, attention to the bowels, an anodyne at night, and the extra local cleanliness which follows from the use of injections and lotions, will of themselves, and without any internally-administered drug, give temporary ease and improvement.

Besides, it must not be overlooked in observing the effects of drugs on cancer, that some cases of cancer seem to halt in their progress, and stand still for a longer or shorter time—nay, even more, they seem to retrogress. I have at the present time a man with a cancerous ring stricture of the rectum, who many months ago came to the cancer out-patient department emaciated, pinched, and haggard-looking. At his first visit there was a plug of hardened fæces stopping up the lumen of the stricture like a cork in the neck of a bottle. This being broken away, he was ordered confection of senna and quinine mixture, and would not hear of colotomy "at present." He still comes regularly, has improved in strength and appearance, and always says he is "wonderfully better"; but there is still the stricture. If he had been taking the turpentine I cannot doubt that it would have received all the credit for his improvement. Again, cicatrisation of a cancerous ulcer, such as has been going on in Case 10, though somewhat rare, is every now and again seen, more especially in old people and in cancer of the breast. During the last ten years I have seen eight or ten such cases at least, but the process is generally to be distinguished from healthy cicatrisation by the occurrence of fresh induration in or beyond the cicatrix, as in the above case. Lastly, one not unfrequently sees cases where the whole of a large tumour of the breast has sloughed away by degrees, leaving a narrow sulcus or fissure, with perhaps a small flattened indurated ulcer at one part, partly scabbed over, and having shallow sulci radiating from it into the thickened parts around. In some of these cases it is hard to believe at first that an operation has not previously been performed; but there has never been any reason to think that the tumour has "melted away" by the agency of any medicine.[1]

It would have been a pleasant task to have reported a number of successes, and to have congratulated Professor Clay upon having made the discovery of a cure for cancer. But after a long and careful trial, the conclusion forced upon me is, that as a cure for cancer Chian turpentine is utterly valueless.

[1] These remarks are suggested by one or two of the cases which have been published in which Chian turpentine has been given.

PATHOLOGICAL SOCIETY OF DUBLIN.—The undermentioned have been elected for the ensuing session:—President: A. Foot. Vice-Presidents: John T. Banks, Samuel Gordon, Edward Hamilton, Thomas Hayden, George H. Kidd, Joliffe Tufnell. Council: J. K. Barton, A. H. Corley, G. F. Duffey, J. M. Finny, R. J. Harvey, James Little, T. E. Little, R. McDonnell, William Moore, C. Nixon, J. M. Purser, W. Stokes. Secretary for Foreign Correspondence: J. W. Moore. Secretary and Treasurer: E. H. Bennett.

CLINICAL REMARKS TO STUDENTS
ON THE

DIAGNOSIS OF THE VARIOUS FORMS OF CONGENITAL HEART DISEASE.

BY SEYMOUR J. SHARKEY, M.B.,
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(Concluded from page 847.)

THE diagnosis of the varieties of diseases of the heart acquired after birth has arrived at a perfection in no way attainable in cases of congenital disease Indeed, it is, as a rule, impossible to say more than that a person has congenital heart disease, and to make a more or less probable suggestion as to its nature. Why this difference? you will ask. The principal points on which we rely for the diagnosis of ordinary acquired diseases of the heart are:—1. The fact that the blood passing through an orifice which is abnormally contracted, dilated, roughened, or guarded by incompetent valves, produces a murmur which is heard by the auscultator. 2. The murmur is heard in its maximum intensity in definite positions for each of the valves, and is conducted in the course of the stream of blood which produces it. 3. Observation of the time in the cardiac cycle at which the murmur occurs, which we express by the terms presystolic, systolic, and diastolic, helps to indicate the condition of the orifice at which the murmur is produced. 4. Those cavities of the heart which are behind the diseased part, that is, in the direction of the venous circulation, or which have any special stress thrown upon them, become hypertrophied and dilated, and we detect their increase in size by percussion.

Thus, for example, in aortic regurgitation: (1) a murmur is produced over the base of the heart, where the aortic orifice is situated; (2) it is diastolic in time and conducted down the sternum, that is to say, towards the left ventricle, into which the blood is regurgitating; (3) the left ventricle is found to be increased in size, owing to the additional pressure and work which is imposed upon it, by the blood which has already been propelled onwards ever returning to be propelled again.

Now in congenital disease there are at least two more orifices which have to be taken into consideration, in addition to those which are present in a normally formed adult heart. These are the aperture in the auricular septum and the aperture in the ventricular—orifices which are placed very close together and through which the blood may be flowing either from left to right or from right to left. There is likewise an additional vessel, the ductus arteriosus. Any one or all of these three structures may be opened or closed in any case without there being any means at our command for detecting their actual condition. Hence while in the adult we have an almost constant anatomical structure to deal with, in congenital diseases we have a variable one, and the varieties are not such as we can determine during life. When we try to apply to such patients the rules which serve so well for our guidance in cases of acquired disease, we soon see how lamentably they fail. Let us take an example or two.

If the case be one of constriction of the pulmonary artery there will also probably be present an aperture in one of the septa or a pervious ductus arteriosus, and the murmurs which may be produced as the blood passes through these structures will be added to that in the constricted artery, and will tend to confusion; or the murmur which should be occasioned at the diseased orifice may be suppressed, the pressure of the blood going through it being rendered insufficient for the production of an abnormal sound by the diversion of the stream in another direction. But more than this, we get little information, if we are not absolutely led astray, by observing the parts of the heart which are hypertrophied. If we conclude from an increase in size, which we find almost confined to the right side of the heart, that the pulmonary artery is the seat of disease, we may be right or we may be wrong. Should the obstruction to the onward flow of blood through the pulmonary artery be only partial, and should the septum ventriculorum be incomplete at its upper part and deviate, as it often does, to the left, so that the aorta rises partly from the right ventricle, then the latter will be hypertrophied, owing to the obstruction in the pulmonary circulation which it tries to overcome, and to its efforts in assisting in the systemic circulation through the aorta. But suppose the obstruction is situated in the aorta, then the blood may flow backwards through the fœtal orifices and be carried by the right ventricle into the ductus arteriosus, and so into the general circulation; and the right ventricle may become hypertrophied because it has to carry on not only the pulmonary but also the systemic circulation; while the left ventricle, which should have had the extra work to do, is relieved of its burden by the patent fœtal openings, and may retain its natural size. Percussion then would indicate hypertrophy of the right side, whether the aorta or the pulmonary artery were the seat of the disease. Again, if the pulmonary artery were totally obliterated the blood would all pass over to the left side of the heart, and the left ventricle having to carry on the systemic circulation through the aorta and the pulmonary through the open ductus arteriosus, or other vessels, would become hypertrophied; while the right ventricle would be reduced in size, notwithstanding the presence of the abnormality on the right side. It is then the patency of these fœtal communications which, while so beneficial to the patients, leads physicians all astray, by transferring the blood pressure, together with the hypertrophy which is caused by it, from one side of the heart to the other.

I venture to repeat, therefore, what I said before, that the most we can do in any given case is to diagnose the presence of congenital disease, and make a suggestion with more or less chance of being correct as to the exact seat of the abnormality. But, it may be objected, physicians do occasionally diagnose rightly the valvular lesion in congenital diseases. True, they do; but after all that is a very partial diagnosis, and of comparatively little worth. The value of a diagnosis must be gauged by its bearing on treatment and prognosis. The former is practically the same in all cases of congenital disease of the heart; but the prognosis should be very different according to the pathological condition present in each case. In acquired heart disease our prognosis depends—

1. On the particular lesion present, and our knowledge of the usual history of patients who are the subjects of it.

2. On the results of our physical examination of the heart, and the judgment we form as to the effect which the disease has already had on the muscular cavities which have to bear the brunt of it.

3. On the present general condition of the patient.

In congenital diseases of the heart, even if we detect the orifice which is the seat of the original disease, we are unable to make the really important part of the diagnosis: for we are unable to answer the question—what arrangements have been made in the course of development to neutralise the valvular defect by appropriate communications between the arterial and venous systems? Hence we are unable to say on what parts of the heart the stress has fallen, and how they have borne it. We have nothing, as a rule, to fall back upon but the general condition of the patient.

Let me conclude these few remarks by giving you the notes of two cases, which I had the opportunity of observing during life and of seeing examined after death—cases which illustrate well the points which I have insisted on. The patients were under the care of Dr. Peacock and Dr. Ord, to whose kindness I am indebted for permission to make use of them for my present purpose. A full account of Dr. Peacock's case may be found in the Transactions of the Pathological Society, 1878, page 43; of Dr. Ord's in the St. Thomas's Hospital Reports for 1879, page 227.

CASE 1.—E. P——, aged ten, was admitted under the care of Dr. Peacock on Nov. 28th, 1876. She had suffered from shortness of breath and pains in the chest from infancy, and was a puny, delicate-looking child. Her cheeks were flushed and her lips purple, and she had great dyspnœa on exertion. The feet were slightly œdematous, but the fingers were not clubbed or livid. The pulse was 108, somewhat irregular both in force and frequency; respiration short and rapid, 48. The chest-walls were very prominent over the cardiac area, and the dulness on percussion extended from the right nipple to a point just beyond the left, measuring in this transverse direction seven inches. A very loud musical murmur was heard all over the region of the heart, and was systolic and loudest at the base, though very evident at apex and faintly heard at the angle of the left scapula. The second sound was loud and crashing, especially on the left of the sternum. A thrill,

mainly systolic, was felt all over the heart, but was most distinct at the apex. The hepatic dulness descended to the level of the umbilicus, but the liver did not pulsate. The jugular veins were distended and pulsated. Respiration was puerile, but otherwise normal. Temperature 96·4°; urine 1031 sp. gr., and contained no albumen. The patient suffered from pain and paroxysms of dyspnœa at intervals. By Feb. 7th, 1877, the dropsy had increased, and the urine contained a quantity of albumen. She had much pain and severe paroxysms of dyspnœa, and there was much bronchitic rhonchus in the chest. She died on Feb. 24th, and during the latter part of her life the cardiac murmur was heard most loudly at the apex.

On post-mortem examination it was found that the heart was enormous. The right auricle and ventricle were greatly dilated and occupied almost the whole anterior aspect of the heart. The pulmonary artery was greatly dilated, but the valves healthy. The aortic and mitral valves were healthy, but the aortic orifice was very small, as was the whole thoracic portion of the vessel. In the auricular septum was a large orifice, which measured 3·4 inches in circumference. The foramen ovale and ductus arteriosus were closed.

The probable history of this case is, I think, that during intra-uterine life the development of the aorta was owing to some cause or another arrested. This increased the blood-pressure abnormally behind the aortic orifice, so that the blood found a way of escape into the right auricle through the incomplete auricular septum, and kept open a permanent orifice in it. The right side of the heart being thus constantly over-filled, acted with greater energy; and, by constantly propelling more than the normal amount of blood into the pulmonary circulation, it not only greatly increased in size itself, but also caused a simultaneous increase in the size of the pulmonary artery.

The closure of the foramen ovale, notwithstanding the persistence of an aperture in the auricular septum, may probably be explained by the fact that the blood flowed from the left to the right auricle, and, as the valve of the foramen ovale projects on the left of the septum, the increased blood-pressure in the left auricle would tend to close rather than to keep it open. When we consider the physical signs during life—viz., great increase of cardiac dulness to the right of the sternum, and but slight increase to the left, a thrill most evident at the apex, and a murmur which, though heard everywhere, was at first loudest at the base and subsequently at the apex—we must confess that no one could have solved the problem and predicted the results of the post-mortem examination.

CASE 2.—M. A. J——, aged thirty-four, was admitted under Dr. Ord on Oct. 29th, 1879. She had had measles, but no other severe illness; had always suffered from palpitation, some shortness of breath, and tendency to blueness on exertion, but she had nevertheless worked hard. She had also suffered from occasional epileptic fits for the last twelve months before admission. When seventeen years of age she was "blown up" in a cartridge factory, when her spine was injured and her right leg broken. Her illness, for which she was admitted into St. Thomas's Hospital, commenced three weeks previously with pain in the "stomach," unaccompanied by tenderness or vomiting. On Oct. 29th she had been walking quick to get to the hospital in time, when she vomited a large quantity of blood. On admission the patient was ill-nourished, anæmic, short of breath, and altogether very ill. There was evident pulsation in the jugular veins. The cardiac area was prominent, and pulsation could be seen from the second intercostal space on the left to a point two inches below and within the nipple. A thrill could also be felt all over the cardiac area, but was most marked over the origin of the pulmonary artery. Dulness on percussion extended upwards to the first intercostal space on the left, to the right as far as mid-sternum, and to the left just beyond the nipple. A loud, crashing, systolic murmur could be heard all over the heart, but was most intense at the base, being heard loudly up the sternum and towards the left clavicle, and much less so to the right of the sternum. The lungs were resonant. She died on Nov. 7th.

Post-mortem examination.—The abdominal viscera were transposed. The pericardium measured seven inches and a half vertically, seven inches transversely in the line of the nipple. A number of old, white, thickened patches, from half an inch to an inch in diameter, were situated on the visceral layer of the pericardium on the anterior surface of the right ventricle, and on the front of the great vessels at the base, where in some places they projected in conical villous masses. The heart was very large, and the greater part of it was situated on the left of the median line. Its anterior surface was almost entirely formed by the right ventricle. The right auricle and ventricle were greatly dilated and hypertrophied. The left auricle was also very much enlarged. The left ventricle was comparatively small. The conus arteriosus and the pulmonary artery were enormous, and apparently gave rise to the great increase of dulness to the left of the sternum towards the clavicle, which was observed during life. Though the calibre of the pulmonary artery was so greatly increased, the vessel and its valves were healthy. The septum ventriculorum was complete, and the ductus arteriosus closed. The auricular septum was very thin, and the foramen ovale was altogether open and destitute of valve. But, besides this, the whole of the lower part of the septum was absent, so that a very free communication existed between the two auricles. The tricuspid valve was healthy, and on looking up from the right ventricle towards the auricles, one saw clearly into both of them, the defect in the auricular septum being in a direct line between the left auricle and right ventricle. The mitral valve was thick, and the orifice constricted, not admitting two fingers. The aortic valves and orifice were healthy, though the vessel was rather small.

The probable history of this case is that the mitral orifice becoming diseased the flow of blood through it was obstructed, and the stream became diverted through the incomplete auricular septum, which consequently remained undeveloped. The blood arriving in the right auricle, as well as part of that in the left, was propelled through the tricuspid orifice into the right ventricle, and the latter became greatly hypertrophied owing to the abnormal amount of work thrown upon it. The great quantity of blood driven into the pulmonary artery by the hypertrophied right ventricle gave rise to an increase in the size of this vessel, while the small quantity of blood which passed through the aorta was accompanied by a diminution in its calibre.

It is possible, however, that an abnormally largely developed pulmonary artery was the original malformation, and that the incomplete septum, the diversion of the blood from its natural course, and consequent diminution in the size of the mitral orifice and aorta, were only secondary results. But whatever may have been the true intra-uterine history of the case, the only thing which could have been diagnosed during life was an abnormal condition of the pulmonary artery; while neither the condition of the auricular septum nor the mitral valve could have been determined. Such a case brings forcibly before us how little skill we can pretend to in the diagnosis of congenital diseases of the heart, and justifies, I think, some of the remarks which I have made upon this subject.

ON A CASE OF EXCISION OF THE SCAPULA.

BY EDWARD BELLAMY, F.R.C.S.,
SURGEON TO CHARING-CROSS HOSPITAL; HON. FELLOW OF KING'S COLLEGE, LONDON.

ALTHOUGH the operation of removal of the entire scapula has been performed on several occasions, the cases are sufficiently uncommon to warrant an isolated one being placed on record, and that in detail, with any remarks which may have the effect of adding to the celerity of its execution and its bloodlessness. The proceeding has been instanced as "conservatism" in its highest sense, yet it is quite open to question whether, when undertaken for obvious malignancy, the term is absolutely applicable; however, there is no doubt that, if it be supposed that the scapula only be involved, it is the surgeon's duty to undertake it.

The patient on whom I recently performed this operation was a strong healthy-looking boy, fourteen years of age. A small swelling was observed about the middle of the scapula in August last, and when seen by me he was supposed to be suffering from a dislocation of the humerus; it was, however, evident that it was a very rapidly increasing malignant growth, probably either encephaloid or a round-celled sarcoma, forcing the humerus away from the

scapula. The tumour, when I operated, was about as large as a child's head, non-adherent to the integument, and the scapula was freely movable over the structures normally in relation with it.

On account of its rapid development I decided to remove the entire scapula at once, but I particularly desired to preserve the clavicle and humerus, as the scapulo-humeral articulation was evidently uninvolved. Accordingly, on Oct. 2nd, I operated as follows:—With the view of preventing hæmorrhage, I first cut down upon the subclavian artery, and directed an assistant to compress this vessel against the first rib, and to be ready to *grasp* the first flap should the bleeding be very severe. Next, I directed a second assistant to *extend* the arm forward with one hand, and to compress the axillary artery as *high* up in the axilla as he could with the other, in order to control the subscapular artery, which in this instance was easily detected, as it was thrown up by the growth. I thus prevented any large amount of blood from passing into the arm, and calculated on arresting any return current by the second manœuvre. My first incision extended from the tip of the acromion to the base of the spinous process, and the second along the spinal border of the scapula, involving integument only. I then nipped through the acromion. The tissues gaped sufficiently to expose the entire mass, which bulged into the wound. Next, I divided the muscular attachments to the spinal border, and passing my knife beneath the separated acromion, disarticulated the humerus. Grasping the mass with my left hand, I dragged it downwards and outwards towards the axilla, and divided the muscular attachments to the upper border of the bone, having now the tumour entirely under control. I now swept the knife along the axillary border, and the scapula and its growth were removed. The cutting part of the operation occupied but a few minutes; strict antiseptic precautions were adopted, and the wound healed by first intention. In a few days, unfortunately, the site of the acromion showed signs of recurrence, and accordingly on Oct. 28th I proceeded to remove it. I found that the disease was progressing downwards past the apex of the axilla, and evidently infiltrating all the tissues. Any further operation I regard as useless mutilation. My scapular excision was an attempt at conservatism, and in the face of a round-celled sarcoma an attempt merely.

The main points I desire to call attention to are the bloodlessness of the operation and the ease of removal of the mass. I have had the experience at present of but one case in my own practice, but I have seen others, and have been struck with the apparent difficulty of the operation. Of course, there may have been greater complications; but it would seem to me that by getting well under the scapula from its spinal border, and tilting it outwards and downwards towards the axilla, a large amount of leverage is obtained, and disarticulation may be performed with great rapidity, a factor of importance when hæmorrhage is expected.

The lad has complete control over the arm and forearm, and the divided scapular muscles seem already to have acquired some kind of attachment.

If I ever have the occasion of removing the scapula for a "growth" again, I shall take care to avoid any attempt at the preservation of the symmetry of the shoulders, supposed to be gained by leaving the acromion, and excise the bone *in toto* to the scapulo-clavicular articulation, on the chance of the disease being confined to the bone itself. Further, I should certainly not undertake it in the event of *immobility* of the scapula, or any decided failure in its "excursion" over the ribs.

Wimpole-street, Cavendish-square.

NOTE ON HEMIN, OR SO-CALLED HYDROCHLORATE OF HEMATIN.

BY J. L. W. THUDICHUM, M.D., F.R.C.P. LOND.

ON page 116 of the "Physiological Chemistry," by Dr. Gamgee, occurs the following statement:—"It is held by Thudichum that hæmin contains no chlorine, and he therefore looks upon it as crystallised hæmatin."

In the journal of the Chemical Society for September, 1876, will be found a paper by myself and my then assistant, Mr. C. T. Kingzett, entitled "On Hemin, Hematin, and a Phosphorised Substance contained in Blood-corpuscles." In the research embodied in this paper the following was proved. Hemin, prepared by one of us, by a modification of Wittich's process (Eleventh Report of the Medical Officer of the Privy Council, 1869, p. 155), entirely crystallised in very minute bluish-black rhombic plates was analysed and found to contain 7·651 per cent. of iron, 3·021 per cent. of chlorine, and 0·608 per cent. of phosphorus (mean of three analyses). We then say: Hemin has been considered as a hydrochloride of hematin; by others, again, as a basic hydrochloride, or mixture of hydrochloride of hematin with free hematin. Our researches show that it contains besides these two bodies a considerable amount of a crystallised phosphorised substance. It is thus proved that the crystallised state of substances of such high atomic weight as the body before us is no guarantee of chemical purity or definite composition.

We then describe experiments intended to saturate the hemin with hydrochloric acid. Of this 3·3 per cent. were added to the hemin. This experiment shows that crystallised hemin is by no means saturated with hydrochloric acid, but contains hematin in the uncombined state; this latter probably takes up some of the hydrochloric acid added. But the possibility that the myelin (phosphorised substance) contained also in the hemin may also take up some hydrochloric acid cannot be lost sight of, and is raised to a probability by the known bearing of myelin from brain matter. In the next division, treating of the action of nitric acid upon hemin, we disprove a statement of Preyer, made in the little pamphlet on blood-crystals, so copiously used by Gamgee, that he had found suboxide of iron (ferrous oxide) in a solution containing excess of nitric acid. In the fourth division we show that hemin, subjected to treatment with concentrated sulphuric acid, yielded cruentin, the body first described by one of us in the Report of the Medical Officer of the Privy Council for 1867 (p. 228) and 1868 (p. 161). The fact that this body (cruentin), with many salts and varieties, was first discovered at the time, and first described in the publication mentioned, is not stated by Dr. Gamgee, who describes it as the discovery of a continental chemist, although the observations of the latter were not published until four years after those just quoted. We then proceed in the fifth division to describe experiments intended to effect the extraction of iron from the hemin by the process of C. Paquelin and L. Jolly,[1] and get as a result (after extraction and isolation of the phosphorised body) a hematin in which the iron had not only not been diminished, but which contained more iron than had ever before been found in any preparation of hematin. Its analysis led to the formula $C_{32}H_{32}FeN_4O_6$. We then disprove a statement of Hoppe-Seyler, who had explained an inconvenient excess of nitrogen found by him in his analyses of hematin as due to an absorption of ammonia from the air, by showing that mere vestiges of ammonia make hematin soluble in water.

In the last division of the paper we describe the isolation, properties, and analyses of the phosphorised body, and its cadmic chloride compound, and show that it is an amidated myelin, almost identical in composition with an amidated myelin isolated by one of us from the brain. This is the first and only analysis of the phosphorised body from blood-corpuscles ever made. It is not given in Dr. Gamgee's text-book.

On page 114 of his treatise Dr. Gamgee says that hemin, which he terms hydrochlorate of hematin, can be transformed into hematin by solution in potash and neutralisation of this solution by hydrochloric acid. The washings are to be tested with solution of silver nitrate. At the conclusion of the paragraph he quotes Hoppe-Seyler as his authority, and at the foot of the page the place, "Beiträge zur Kenntniss des Blutes des Menschen und der Wirbelthiere. Das Hæmatin. Med. Chem. Untersuchungen," Heft iv., 1871, s. 523.

Now, in that publication, and at that place, Hoppe-Seyler prescribes that the dissolved hemin shall be precipitated with *sulphuric acid*, and shall be washed with water (not "boiling water," as Gamgee says) until *barium chloride* leaves the washings clear.

Earl's Court-road.

[1] Comp. Rend., No. 79 (1874), p. 918.

CONGENITAL COLOUR-BLINDNESS INCURABLE.

BY Dr. B. JOY JEFFRIES.

IN an English medical publication for August 21st is an editorial notice of Dr. Favre's paper read before the Paris Academy of Medicine on the "Relations of Colour-blindness." Dr. Favre's mistaken belief in the curability of congenital colour-blindness is apparently agreed with from this sentence: "All these circumstances go to prove that such an examination should be more generally resorted to, and that the colour-blind should be made responsible to the law for their mistakes; and as Daltonism can for the most part be cured by exercise, the legislation required would certainly become an excellent therapeutic agent. Those persons who were past cure would be warned that they must abstain from giving any judgment on coloured objects."

It seems particularly unfortunate that editorial credence should be given to Dr. Favre's ideas just at a time when a very general testimony of the members of the British Medical Association has drawn the attention of the profession to the subject of colour-blindness. It should at least have been stated that he stands almost alone in this belief of the curability of congenital colour-blindness by exercise with colours. A few years ago Dr. Favre's mistake might have been very natural, but at the present time, after the careful reports of the examination of many colour-blind by the best scientific observers, who have also worked practically, a belief in it should no longer be indulged. It is a most dangerous error to promulgate among the laity that a colour-blind sailor or railway *employé* can be cured by exercise with colours.

I took ground against Dr. Favre on this point in the *Boston Medical and Surgical Journal*, March 28th, 1878, quoting especially Nilson and Holmgren in my support. I have since then devoted a chapter to the subject in my volume on "Colour-blindness: its Dangers and Detection." I will not lengthen this communication by quoting from my book, as all can there read what is said. Since my book went to press a number of very competent observers have criticised Dr. Favre's curious mistake and shown the fallacy of his reasoning. This is especially the case with those gentlemen who have had time and opportunity to study the colour-blind and patiently test in many ways their chromatic sense, as Donders, Holmgren, Magnus, Cohn, Stilling, Pflüger, Netoliczka, Fontenoy, and others.

Respect for authority and isolation in my early work, alone prevented me from sometimes doubting whether the colour-blind could not see differently after years of familiarity with colours. I have since then come in contact with colour-blind scientists, chemists for instance, who have done everything to try to improve by practice their chromatic sense, and I have by intercourse with and watching under examination more than seven hundred colour-blind, learned somewhat more of how they supplement their defect, both by their other senses and, so to speak, through their very defect, as has been lately explained by Professor J. Stilling in his monograph on the "Vision of the Colour-blind."

Dr. Favre induced his teacher friends to test their scholars for colour-blindness by asking them the names of coloured objects. The girls could tell, the boys could not. Hence from 10 to 30 per cent. of the latter were called colour-blind, and these were *cured* by teaching them the names of the colours. This absurdity is now self-evident. Upon it was based his belief in the curability of congenital colour-blindness. He may not now adhere to the whole of what he once recorded, but his aim is the same.

The laity who see how the colour-blind who have had practice with colours will get on and conceal their defect, particularly if these laity are officially or pecuniarily interested in preventing legislative control of this dangerous defect, *cannot* often and *will not* even disbelieve in the change of the colour sense. The importance, therefore, of constantly impressing on the community that the chromatic sense does not alter, and as far as possible explaining the natural deception, must be recognised by all. Dr. Favre's opinion in this matter has no weight in Europe, as his perhaps natural mistake has been often pointed out most satisfactorily. The editorial endorsement of it in the medical publication before referred to might, however, give it temporarily some weight in England, till such criticism as has been passed in Europe, and as I have here made, disabuses the community, the medical at least, of the value of the recorded observations.

I have thus called attention again to this important point, as the effort for control of colour-blindness and visual defects on land and sea is being pressed in all parts of the civilised world, and an International Commission has been proposed to discuss and agree on standards of efficiency and standard tests, a Bill having been reported and introduced into the last session of the American Congress, authorising the United States Government to take the initiatory steps for the formation of this commission.

Boston, U.S.A.

CASE OF CANCER OF THE UTERUS DURING PREGNANCY.

SAFE DELIVERY TO MOTHER AND CHILD.

BY JAMES TURNBULL, M.B., C.M. EDIN.

Mrs. P——, aged forty-one, consulted me on February 28th, 1879. She complained of great weakness and loss of appetite. She had no particular pain, but stated that for the last three or four months the menstrual flow had become more frequent and lasted longer than formerly. This she attributed to the change of life, and objected to a vaginal examination. She was a little woman with an anæmic and unhealthy-looking appearance. She had five children, the youngest five years old; all her labours but the first had been easy. On examination I could detect no heart, lung, or renal disease. I prescribed a mixture of perchloride of iron and solution of the extract of ergot to be taken thrice daily along with nourishing food and wine. Under this treatment she improved considerably in health and appearance. On May 13th I was sent for as she had an alarming attack of hæmorrhage. I found her in bed, looking pale and exhausted. Her pulse was very rapid and feeble. She had evidently lost a large quantity of blood. On examination I found the vagina filled with dark clots of fetid odour. Growing from the posterior lip of the os I felt a nodulated mass of friable structure, which bled freely on being touched. The growth had a broad surface and was attached by a broad pedicle to the posterior lip of the os. I cleared the vagina of clots and swabbed the surface of the growth with a saturated solution of perchloride of iron in glycerine. This had the effect of completely staying the hæmorrhage. Hitherto my attention had been chiefly directed to the uterus per vaginam, but on passing my hand over the abdomen I could feel it enlarged, though not to any great extent. I suggested to her the possibility of her being pregnant. She said she had not the slightest idea of such a thing, more especially as she had menstruated so recently, and she had none of the feelings she used to have in the early months of her pregnancies. Evidently she had mistaken the hæmorrhage from the growth for menstruation. My diagnosis was cauliflower excrescence with probably coexisting pregnancy.

Of the nature of the tumour there was no doubt, as I examined a portion of it under the microscope and found it to be epithelial cancer.

The pregnancy was not sufficiently far advanced to make the diagnosis absolutely certain. I therefore determined to wait rather than pursue investigations further at that time. In about a week or so afterwards the difficulty was removed beyond a doubt, as the patient felt the movements of the child, and the fœtal heart could be heard beating distinctly. The hæmorrhage did not return, and she continued to improve in general health.

On Saturday, Oct. 19th, at 10 A.M., I was sent for, as labour had commenced. There had been a considerable amount of hæmorrhage. The vagina was filled with clots. The os was sufficiently dilated to admit the introduction of the tip of the forefinger. The growth did not seem to have increased much in size, and appeared to be entirely confined to the posterior portion of the cervix uteri. The head was presenting, the membranes were intact, and the child was alive. The pains came on at long intervals, and

were not very strong. Labour went on slowly during the next four days; the patient's strength kept up wonderfully. On Wednesday, at 1 P.M., the pains became more severe, and were attended by gushes of blood. To stop the hæmorrhage, which was excessive, I introduced into the partially dilated os a piece of sponge saturated in perchloride of iron in glycerine. This had the desired effect. The os would then admit two fingers. About 9.30 P.M. she began to get restless, and seemed much exhausted; her pulse rose to 120, her temperature to 99·6°. The membranes were ruptured and the pains had entirely ceased. I determined, therefore, to deliver at once by means of the long forceps.

The difficult conditions to overcome were two—viz., a rigid undilatable os and the obstruction of the diseased mass to the passage of the child. Owing to the disease being confined to the posterior lip of the os, I was able to dilate the anterior lip with my fingers, though only to a slight extent. The head was above the brim, with the anterior fontanelle to the right. Having administered chloroform I applied Barnes' long double-curved forceps. After pulling steadily at intervals I felt the head begin to advance, and in half an hour from the application of the forceps the patient was delivered of a fine healthy male child. A large portion of the diseased structure came away in front of the head. The placenta separated easily, and there was no further hæmorrhage. For two hours after delivery she was much exhausted, but on the administration of a little brandy and sedative solution of opium she soon rallied. For several days after delivery her temperature continued high, but otherwise she had no bad symptom. On the eighth day her temperature became normal; on the sixteenth day she was able to be out of bed. For the next three months she was able to attend to her household duties, and seemed in good health, having no pain or discharge. At the end of February of this year the disease began to spread rapidly, involving the bladder and rectum in its course. Having read of Mr. Clay's wonderful success with Chian turpentine in the treatment of this disease, I at once adopted his method, but am sorry to say without success. Possibly the disease was too far advanced before beginning the treatment. My patient sank under the disease May 23rd, 1880.

Such cases are fortunately rare in practice, and no definite rules for their treatment can be given. The duration of the labour was extremely long. Having read of such cases terminating favourably when left alone, I resolved to give nature every possible chance. I think, however, the condition of my patient was such as to warrant immediate interference, as she was rapidly sinking. I can hardly venture to say that it was good practice to draw the head through a rigid partially dilated os. I did so with the hope that if laceration did take place it would be through the cancerous mass. I cannot tell what actually did take place, not caring to explore too much, and being only too glad to bring such a long and anxious case to so favourable a termination.

Dunbar.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium

LONDON HOSPITAL.

OVARIAN DYSMENORRHŒA, WITH RETROFLEXION OF THE UTERUS; SYMPTOMS DEMONSTRATED TO BE UNCONNECTED WITH THE RETROFLEXION.

(Under the care of Dr. HERMAN.)

IN this interesting case, for the notes of which we are indebted to Mr. Winskell, it was demonstrated that the symptoms present were not connected with retroflexion of the uterus.

S. B——, aged twenty-three, a servant, single, attended the obstetric out-patient department on Nov. 28th, 1877. She stated that she had had rheumatic fever when aged eight, and the usual infantile disorders, but otherwise her health had been good till her present illness. She first menstruated at fifteen, but was never regular, the flow returning at intervals varying from two to four weeks, frequently being brought on by fright or excitement. The hæmorrhage usually lasted five days, and was copious. Since the age of sixteen it had been accompanied with pain, which had gradually got worse, and for the last two or three years it had been so severe as to lay her up. The pain was wont to come on from two days to a week before the flow, and to reach its height on the third day of the hæmorrhage. It was described as a dull, heavy pain, constant, not paroxysmal, relieved by lying down; situate about two inches internal to each anterior superior iliac spine, in the sacral region, and extending down the thighs. The pain was worse when the flow of blood was profuse. For two or three years the pain had been felt not only at the menstrual periods, but in the interval as well, though less severely. For twelve months she had been troubled with leucorrhœa, and much pruritus of the vulva. Too frequent micturition was the only other local trouble. For two years her appetite had been bad; the bowels were habitually constipated, and there was also a feeling of weight and fulness after food. Sleep was disturbed, and the patient was very nervous; this was attributed to a fright four years ago.

On examination there was found tenderness on abdominal pressure over the situation of either ovary. Per vaginam, the uterus was found to be movable, natural in size, so sharply retroflexed that the body seemed to form with the cervix a right if not an acute angle. It was easily reducible with the sound, but fell back again directly the instrument was removed. Much pain was caused by pressure on the body of the uterus. Per rectum there was greater tenderness on each side of the uterus, the most being on the left side.

She was treated as an out-patient until May 18th, 1878. Medicines were given to improve digestion and general health, and various kinds of vaginal pessaries (Hodge's and its modifications) were tried, but none could be got to keep the uterus in the axis of the pelvic brim. There was no improvement in the symptoms, which, if altered at all, got rather worse.

On May 18th, 1878, she was admitted into the hospital. She had begun to menstruate on May 14th.

On the 30th, Wynn Williams's intra-uterine stem and shield were put in. She was subsequently examined several times at intervals, in order to ensure the pessary being kept in its proper position.

On June 17th the stem was still resting in the socket of the shield intended to receive it, so that from May 30th to June 17th the uterine canal was perfectly straight. She menstruated from June 6th to the 15th with *more pain than usual*. She felt only slightly, if at all, better in her general condition than when admitted. During the last few days she had complained of a discharge slightly mixed with blood, and of much pruritus. As, therefore, the mechanical straightening of the womb did not seem productive of benefit, the stem and shield were removed, and a thick india-rubber ring (the so-called "watch-spring" pessary) was put in. After the introduction of the ring the uterus was found bent back, the body resting on the ring, but the flexion not so acute as when the patient was without a pessary.

The patient menstruated from July 1st to the 8th less copiously than usual, and with "no pain to speak of." On the 12th she had no pain at all. The leucorrhœal discharge was better; the pruritus had been relieved by the use of calomel ointment. The uterus was in the same position as when the last note was made. The patient, who had kept her bed since admission, was allowed to get up.

On July 27th the uterus remained in the same position; patient thought herself quite well, and was sent to the country.

It will be seen from the foregoing that while straightening the uterus did not relieve the patient, the symptoms disappeared under the influence of rest, while the retroflexion was still present.

On November 16th the patient stated that she had thought herself perfectly well till the 13th, when she lifted something heavy, and fancied the effort had done her some harm; but she could describe no definite symptom. She was still wearing the ring, but the uterus was now in the axis of the pelvic inlet, not retroflexed, as formerly.

On Nov. 30th, the uterus being still in the normal position, the ring was removed.

On Dec. 14th she complained that her old pains were re-

turning. The uterus was still straight, and in the axis of the pelvic brim, although the patient had been for a fortnight without any pessary.

It is not needful to describe in detail the further progress of the case. It will be enough to state that her old symptoms gradually returned; that after they had persisted many weeks, the womb again became retroflexed. As she did not improve under treatment as an out-patient, she was not encouraged to continue attendance; and finally, in April, 1879, the flexion being presumably still present (nothing further having been done to correct it), the patient became pregnant.

Remarks by Dr. HERMAN. — Many gynæcologists hold that flexion of the uterus is a morbid condition which gives rise to symptoms; among others, to dysmenorrhœa and sterility. It is beyond question that flexion of the uterus frequently exists without any symptoms whatever. Where, as in this case, bending of the womb is found associated with symptoms, the causal relationship of the flexion to the symptoms is generally only a matter of hypothesis. The only way in which the hypothesis can be tested is by the effect of treatment; symptoms caused by bending of the womb should of course be removed when the uterus is straightened, and return if the organ should again become bent. It is not in every case that the treatment can be carried out in such a manner as to completely test this point, and cases recorded in which it has been thus demonstrated that the flexion is harmless are few. One case, of course, does not settle so wide a question; but as the one just reported is an item of singularly clear evidence, I have thought it worth record. The main facts of the case are these: (1) That the stem, which kept the uterus quite straight, did not relieve the symptoms. (2) That the symptoms disappeared while the flexion was still present. Did these facts stand alone, it might be asserted that the irritation necessarily caused by an intra-uterine stem prevented the relief brought about by the removal of the flexion from being as manifest and as speedy as it would have been had the uterus been straightened by less severe means. The next fact in the history of the case disposes of this view; for (3) the symptoms returned, although the flexion was absent. These three facts seem to furnish complete demonstration that the flexion had nothing to do with the symptoms. There are some other points, of less importance, which the case illustrates. (4) The case shows the least injurious effect of intra-uterine stem pessaries—viz., pain, discharge, and slight hæmorrhage; symptoms evidently due to traumatic endometritis, and which so commonly follow the use of these instruments, that one authority who recommends them has stated that he looks upon hæmorrhage and free discharge as good signs. (5) Although the uterus was retroflexed, the patient became pregnant. This fact would never have been ascertained had not the patient previously suffered from symptoms leading to an examination of the pelvic organs. It is obvious that no one can tell how many healthy young women there may be in whom the uterus is retroflexed, but who suffer from no symptoms, and when married quickly become pregnant. But until this is known it cannot be proved that flexion of the uterus causes sterility. This case is an item of evidence against the theory which assumes that it does. There is, of course, no ground for asserting that what took place in this case will also happen in others; but it may do so, and perhaps oftener than is supposed.

NEWCASTLE-UPON-TYNE INFIRMARY.

CASE OF CEREBELLAR TUMOUR; NECROPSY.

(Under the care of Dr. PHILIPSON.)

FOR the following notes we are indebted to Mr. E. L. Prowde, M.A., clinical clerk.

A. U——, aged thirty-four, a bricklayer, was admitted March 25th, 1880. He stated that he had enjoyed good health up to October, 1878, when he began to suffer from attacks of violent headache, giddiness, and vomiting. Subsequently he noticed that he could not see distinctly, and that he could not hear with the left ear. About this time he was told by his friends that his face was twisted. He admitted that he had lived very freely, and that he had suffered from syphilis when twenty-five years old.

At the time of his admission his expression was vacant. His face was drawn to the right side. He was unable to close the right eye, to wrinkle the right side of the brow, and to whistle. His tongue when protruded was directed to the right. His food lodged between the teeth and cheek of the left side. There was no anæsthesia. When placed with his heels together, and with his eyes closed, he had a tendency to fall backwards. His gait was reeling, resembling that of a drunken person. The pupils were moderately dilated, equal, and, upon ophthalmoscopic examination, marked double optic neuritis was observed. The respiratory, circulatory, and genito-urinary systems were normal. His bowels were constipated. His principal complaint was of severe occipital headache, paroxysmal, vomiting, and slight difficulty in swallowing.

The diagnosis, as entered by Dr. Philipson, was that of a cerebellar tumour, gummatous in nature. Such was founded upon the following symptoms:—The persistent headache, the continuous vomiting, the paralysis of certain of the cranial nerves, the reeling gait, and the syphilitic history.

He was prescribed the iodide of potassium in large doses three times each day, the bromide of potassium at night, and a saline purge from time to time in the morning. Under this treatment the severity of the headache was somewhat relieved, but the vomiting continued, and, during May, convulsions occurred, tonic in character.

On July 26th it was noted that he was quite unable to walk, from a tendency to reel from the right to the left; on August 7th, that he was giddy when propped up in bed; and on August 14th, that he was rolling about in bed, and that he was delirious. On August 27th he was attacked with severe and persistent hiccough, which continued up to his death, which occurred on August 28th.

Autopsy.—On removing the brain it was found that the cerebellum, on the left side, was adherent to the portion of bone corresponding to the left internal auditory foramen, which foramen was large and excavated, and capable of admitting the end of the index-finger. The bone was eroded. This abnormal adhesion was found to be due to a tumour in the region of the left lobe of the cerebellum. The tumour was about the size of an ordinary jargonelle pear, elliptical in shape, soft, consistent, resembling brain matter, although of a yellow colour on section. The pons was very much flattened on the left side. The rest of the brain was normal. The tumour, upon microscopical examination, was found to resemble granulation tissue, in the general character and arrangement of the cellular structure.

MISSION HOSPITAL, KASHMIR.

OBSTRUCTION OF THE BOWELS CAUSED BY LARGE WORMS; AMUSSAT'S OPERATION; DEATH.

(Under the care of Dr. E. DOWNES.)

A MAN, about forty years old, applied at the out-patient room in June, 1879, complaining of constipation. Purgatives were administered and repeated. After a day or two his case became so serious that he was admitted. Purgatives and belladonna and enemata were tried without effect. On the second day he suffered considerably. There had been absolutely no evacuation for some days. There was vomiting, and it seemed that unless something was soon done he would die of the obstruction. There was no sign of a hernia. Enemata were tried once more, but to no avail. Towards evening it was resolved to perform Amussat's operation that night as a last chance of saving his life if there was not a speedy evacuation.

At about 9 P.M., accompanied by Dr. Ross, the civil surgeon, Dr. Downes saw the patient, and found him in the same state, or, if anything, weaker, and suffering more pain than before. There had been no evacuation. Without further delay he was placed under chloroform. The abdomen was a little tympanitic in places, and absolutely dull in others. It was very much distended, and some coils of intestines could be seen and felt pretty plainly through the abdominal walls distended with fluid fæces. The colon could not be made out. After a brief consultation, it was agreed to perform Amussat's operation.

An incision four inches long was made about two inches above the crest of the ilium on the left side, and about parallel to it. It was made with the greatest care. The structures were divided one by one on a director. At last, what was believed to be the colon was reached. This turned out to be a mistake, for on passing a silk suture into it to draw it forward, fluid escaped having a fæcal smell; but it

evidently was not the bowel, but the peritoneal cavity. On opening it carefully a considerable amount of fluid escaped, and portions of two coils of intestine were seen much inflamed, and so distended with fluid and so compressed against one another that it was difficult to recognise them. One had a transverse direction, and it was taken to be small intestine; the other, which was behind and hidden by the former to some extent, appeared to pass downwards. With the opinion that this might be the descending colon, a portion (about an inch) was taken up in two places, about an inch apart, with a curved needle threaded with silk. The gut was gently pulled forward by the two threads, and the superficial portion divided with a bistoury to the extent of an inch; a tremendous gush of liquid fæces was the consequence, and the stench was so abominable that it was with difficulty that the operation could be completed. The middle of the two threads was pushed up and divided, and then the gut was pulled to the two margins of the external incision and fastened to the skin. All this time the patient was rolled on his left side, and care taken to prevent the fæces from entering the peritoneal cavity. An immense amount of fæces was expelled, and the wound was cleaned and closed with sutures, leaving the artificial anus.

The operation took nearly an hour, and the patient's pulse was weak, and the surface of the body cold. He was put to bed, and was ordered to be kept warm; some brandy was given, and simple, nourishing food, such as milk and soup, was ordered. Next morning he was comfortable, free from pain, and took his food fairly well; fæces had passed by the rectum, and none had that morning come by the artificial anus. Already the gut had become adherent to the margins of the wound; the sutures were therefore removed, and the wound dressed with lint and carbolic oil.

On the morning of the third day he was not so comfortable, and fæces were passing both by the artificial anus and the rectum. The patient's mother stated that an immense number of round worms had passed by the wound; she said about two pounds of these worms had been thus passed. A large round worm was seen finding its way out, and there seemed no doubt the obstruction had been caused by these worms. The bowel, which was rather protruding from the wound, looked inflamed, and there was a good deal of pain in the bowel, near the artificial anus. He was weaker than on the previous day, and the appetite was gone.

On the morning of the fourth day he was still weaker, and some blood was discharged by the artificial anus. At his request he went home, and he died shortly after reaching his home.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Hydro-encephalocele.—Varicocele with small Testicles.—Ulceration of the Colon, with Hypertrophy and Dilatation.—Right Hemiplegia after Scarlatina.

THE ordinary meeting of the Clinical Society was held on Friday, Nov. 26th, the President, Dr. Greenhow, in the chair. The papers read bore on subjects of considerable interest, but excited little discussion. Three living examples of skin diseases were also shown—erythema iris, lichen scrophulosorum, by Dr. Radcliffe Crocker; and tubercles in association with factitious urticaria, by Mr. Morrant Baker.

Dr. CARRINGTON read a paper on a case of Hydro-encephalocele, which he had exhibited last session. The boy, aged seven, an inmate of the Chelsea Infirmary, was under the care of Mr. Fortescue Ingram. The child was born by means of instruments; nothing was noticed wrong until he was two years old, when the back of the head began to protrude, and slowly increased, but has remained stationary for several months past, if not longer. At the upper and back part of the cranium is a large tumour, measuring fourteen inches and a half in circumference at its base, and seven inches and a half over its vertex from side to side. It is completely sessile, with a broad base, soft and fluctuating, non-pulsatile, not translucent. Compression produces no effect at all, and the boy can stand on his head without any ill result. The tumour apparently springs from a large deficiency in the cranium, involving the parietals, especially the left, along the sagittal suture, and the posterior part of the left side of the frontal bone. There is a moderate amount of talipes varus. His general health is good; intellectually he is sharp and cunning, always cheerful, and keeps up an incessant prattle, which, however, is rational. When three years old he was knocked down by a cab, and since then has suffered from fits, which are usually short and transitory, but attended with complete unconsciousness; these have become more frequent and of longer duration during the last seven months, two having lasted some hours. There is weakness, with slight wasting, of the right arm and leg, also increased lately, and a peculiar mode of moving the arm, resembling that of athetosis. There is no optic neuritis. The boy has developed a lateral curvature of the spine, the left shoulder projecting more than the right.—Mr. MARSH asked whether any treatment had been employed, and whether it was not justifiable to tap the tumour with one of Southey's fine trocars; cases are on record where such treatment has resulted in cure.—Dr. CARRINGTON replied that the only treatment up to the present time had been the administration of bromide of potassium, which had exerted some control over the fits. He thought that to tap the tumour would be quite reasonable.

Mr. PEARCE GOULD showed two cases of Varicocele with small Testicles, and read a paper on some points in the pathology of this disease. One of the men shown was eighteen years old; the varicocele was large, had been noticed five months, but gave rise to no symptoms. The testicle was about half the size of the right, but of normal shape and consistence, with slightly exaggerated testicular sense. There had not been any previous injury or disease of the part; no other varices. The other man was seventeen years of age, presenting an almost precisely similar condition, the testicle being even smaller than in the first case; here the scrotal swelling had been noticed seven years, and had not altered during that time. After quoting the views of Paget and Curling as evidence of the prevailing uncertainty as to the effects of varicocele upon the nutrition and function of the testicle, Mr. Gould pointed out that in many so-called examples of atrophy of the testicle from varicocele there was a history of previous injury to, or inflammation of, the part; and he insisted that all such cases must be carefully excluded in an inquiry into this point. In many other cases no mention is made of the history, and they must therefore be accepted with caution. With these reservations he grouped cases of so-called atrophy of the testicle from varicocele in three series: (1) Cases in which the varicocele interfered with the full development of the gland at puberty, and in this group he placed the cases exhibited; (2) cases of very slight atrophy of the gland, a condition difficult to determine with certainty, but believed to be common; he had seen examples of it; (3) cases of extreme wasting of the testis. Though there is reason to believe in the occurrence of this atrophy, he had never seen an example of it, and did not know of any recorded case where the history was so precise as to exclude the possibility of its being either an undeveloped organ, or wasted as a result of injury or inflammation. That varicocele may cause sterility be considered proved by Curling and Gosselin. After the radical cure of the varicocele, slightly wasted or undeveloped testicles attain their normal size. Mr. Gould maintained that neither the greater length of the left spermatic vein, nor its passage beneath the sigmoid flexure, nor its mode of entrance into the renal vein, satisfactorily explained the relatively great frequency of varicocele on the left side; he suggested that the use of the valve usually present at the mouth of the left spermatic vein was to convert the direct aperture of the vein into an oblique one, and that the passage of the blood along the renal vein exerted an aspirating effect upon that in the spermatic vein; in one case he had observed where the valve was absent, the vein entered the renal vein obliquely. In comparing varicocele with other varices, it was shown that it is a disease of early life, most often arising before or at puberty; that it may remain stationary for years and not cause any symptoms, or may undergo spontaneous cure; that the veins are not subject to thinning of their walls and spontaneous rupture, and that it is not produced by the common causes of other varices; and it was thence argued that varicocele was not produced by a

yielding of the veins to increased internal pressure, but was a true venous hypertrophy. And Mr. Gould suggested that the special tendency to the development of venous tissue at this spot, evidenced in the normal pampiniform plexus, was re-excited at puberty and led to an abnormal development, either concurrently with or at the expense of the growth of the testicle. He maintained that there are cases of varicose veins of the lower extremities of the same kind—venous hypertrophies. Mr. Gould intends to practise the operation he recently described in our columns for the radical cure of the cases shown. A case in which this was performed with success thirteen months ago was shown to the Society, as was also a case of varicocele of several years' duration, stationary, and without any injurious effect on the testicle.—Mr. BRYANT thought that facts bore out Mr. Gould's theories. The affection is one of early puberty. He had seen a most typical instance in a boy of seven, in whom there was nothing to suggest a mechanical cause, and since that case he had met with three or four others in boys under puberty, and all of these had been on the left side. Some of the worst cases he had ever seen had been on the right side, and, although it was common on both sides, he could clearly recall two cases in which it was on the right side only. The cause of varicocele is certainly obscure, but the mechanical theory may be discarded. He also agreed with the view expressed in the paper that there is no evidence to show that the small testicles sometimes met with are really atrophied, and he was disposed rather to accept the theory of their being undeveloped. There is no doubt that where the radical cure has been performed, such organs grow and attain their proper size. He mentioned a case of a gentleman who had a large and very troublesome varicocele, with small testicle, on whom he operated, and eighteen months after the testicle was as large as the right, having formerly been only half that size. This patient married soon after the operation. Such cases are strong arguments for operating for varicocele, though it was only certain cases of varicocele that required it. He mentioned two cases of hæmatocele, which had followed violence or strain. In one the tumour was very large, and was mistaken for a hernia, and the surgeon's efforts for its reduction ruptured one of the veins; the other was ruptured during coughing.—Mr. WALSHAM had found in nearly all cases a valve two inches from the opening of the left spermatic vein, and he thought this an objection to Mr. Gould's view of the use of the valve at the mouth of the vein.—Mr. GOULD thought that in such cases as Mr. Walsham alluded to the vein was double almost up to its end, and that this valve merely acted to turn the blood into the alternative channel. He was at a loss to understand how the valve at the orifice of the vein could assist the circulation, if not in the way he had indicated. Mr. Bryant's cases confirmed his statements, and particularly that hæmatocele only results from injury to varicocele; never spontaneously.

Dr. GOODHART read notes of a case of Ulceration of the Colon, with Hypertrophy and Dilatation, in a girl of seventeen. The patient was admitted into Guy's Hospital, under Dr. Goodhart's care, on August 25th, 1880. She had always had delicate health, and in December, 1879, this began to fail, but without any definite symptoms. Her abdomen had been gradually increasing in size since January of the present year, but more rapidly in the last month. She had never had any severe pain in the abdomen, but had suffered from slight sudden pain at times. Since the onset of the abdominal swelling in January, the bowels had been irregular; sometimes she had had constipation, at others diarrhœa. In the last three weeks the bowels had acted seven or eight times a day, the motions being offensive and blackish in colour, with inability to retain them. The action of the bowels had caused no pain. She was remarkably anæmic and spare, and seemed very ill. Her pulse was 128, and her abdomen very much distended. The distension was found to be due to large, hard masses in the abdomen, which disappeared and reappeared in various parts, and were obviously due to a forcible peristaltic action on the part of the bowels. The peristalsis was, indeed, visible; and the abdomen was everywhere resonant. The abdomen was not tender. It contained no fluid, and there was no evidence of enlargement either of liver or spleen. She was suffering from a rather profuse diarrhœa, the motions being dark-coloured, quite liquid and offensive, but she confessed to little pain at any time, and none when the bowels acted. Her temperature was 100°. The other viscera were all healthy. The diagnosis rested upon her age, the extreme pallor, and evident severe illness, the abdominal distension with increased peristalsis and frequent diarrhœa—all these symptoms slowly increasing in the course of eight months; and few will probably be found to criticise the opinion that the patient was suffering from tabes mesenterica; that the disease of the mesenteric glands had led to shortening of the mesentery; and this to intestinal obstruction of a partial kind, from which, and from the ulceration which would in all probability exist under such circumstances, the frequent diarrhœa resulted. The case was somewhat like that of a child who had been partially under Dr. Goodhart's care some months before, suffering from tabes, and in whom a fistula formed at the umbilicus, by which the obstruction was relieved; and the opinion was hazarded that from the distended appearance of the umbilicus perhaps a similar occurrence might happen in this case, but she was so ill that it seemed hardly likely that she would live long under any circumstances. The diagnosis seemed to be so clear that no other alternative one was suggested, and there was nothing in the progress of the case during the few remaining days of life to advance any suspicions as to its correctness. Liquor bismuthi and liquid extract of Bael were ordered, and the diarrhœa checked, but by no means arrested. The temperature varied between 99° and 101·6°; her pulse between 120 and 136. Death came by way of a sudden attack of abdominal pain, followed by speedy collapse, for which no remedies proved effectual. The inspection was made by Dr. Horrocks. The abdomen was enormously distended and tympanitic, the lower part of the colon being greatly dilated and occupying the entire front of the cavity. The sigmoid flexure occupied the right iliac fossa, having pushed the cæcum, which was not enlarged, backwards and inwards. Drawing the bowel from the ileum along the ascending colon, it was found that the latter suddenly dilated about the hepatic flexure, below which point it became wider and wider, so that the rectum formed a huge cylinder of seventeen inches in circumference. The dilated part contained a large quantity of black pultaceous fæcal matter, without scybala, and some of this was exuding into the peritoneum from a small perforation in the sigmoid flexure. The dilated colon was much thickened and tough. It contained several ulcers—two close to the anus, immediately inside the external sphincter, oval in shape, and the size of half a crown, each of them. A little higher up were two others, and in the sigmoid flexure was a large one, with sinuous margins, in the middle of which was a small slough, with a central perforation. In all the ulcers the mucous membrane was destroyed, leaving the muscular fibre exposed, the surfaces being smooth, and the edges thick. There was no stricture at any part. The pelvic viscera were healthy. The following circumferential measurements were made after the bowel had been laid open:—Cæcum 7½ in.; hepatic flexure 11 in.; sigmoid 13 in.; rectum 17 in.; ileum 3½ in. The symptoms in this case were undoubtedly those of tabes mesenterica, but it is to be noted that the hypertrophied bowel produced when contracting masses of such hardness as were noticed at the time to be very unusual, and it may well be doubted whether, under such conditions of obstruction as were assumed to be in existence, tabes mesenterica ever leads to such a condition of hypertrophy of the muscular coat of the bowel as existed in this case. The remarkable absence of pain is another feature which ought, perhaps, to have led to a reconsideration of the diagnosis. The relations existing between the hypertrophy, dilatation, and ulceration were next discussed; and it was remarked that if the history of the case were discarded, undoubtedly the most probable explanation of the case is that from some unknown cause ulceration of the rectum had occurred, that this had led to spasm of the sphincter, and so to obstruction. But this hypothesis could not be so easily accepted—1st, because the history was very much against it; 2nd, because ulceration of the colon is a not uncommon *result* of distension; and 3rdly, because ulceration of the rectum is very uncommon in girls of this age. And it was suggested that the anæmia and ill-health of the patient made the general features of the case not unlike those of a few cases on record where dilatation of the stomach has occurred in young people without the existence of any obstruction at the pylorus,—cases which are paralytic rather than obstructive. It was then, in the light of this view, attempted to be shown that hypertrophy of muscle might *follow* partial paralytic distension, from what is known of the relations between hypertrophy and dilatation in other parts; and finally, the author combated the view that this was simply a case of hysterical

constipation, and entered shortly on the question of the effects of treatment in such cases.

Dr. HORROCKS made the autopsy of this case; the cause of death was evidently the perforation of the bowel, but he could not find any cause for the hypertrophy of the bowel, and he thought it must have been set up by ulceration of the bowel and then spasm during defecation. He could not agree with Dr. Goodhart that it followed atonic dilatation. There was no straining in defecation, and no scybala were found after death.—Mr. BRYANT considered that the hypertrophy of the colon must have been due to chronic obstruction of the bowel of some kind or other; the ulceration was secondary and similar to that seen particularly in the cæcum in cases of organic obstruction. He had had in Guy's Hospital a man, aged twenty-seven, who had been operated on when a child for imperforate rectum, but latterly had neglected himself and suffered from more permanent obstruction and died. At the post-mortem they found enormous dilatation and hypertrophy of the cæcum, colon, and sigmoid flexure, and the intestine ulcerated and gangrenous in parts. That it may occur in hysteria he was sure, and he instanced a case of an hysterical girl, aged twenty-four, on whom right lumbar colotomy had been performed for a supposed organic stricture; he closed the fæcal fistula, and several times passed his hand into the colon, which was quite flaccid and loose. After injections and other treatment it recovered its tone and she was cured. He thought this case was analogous to Dr. Goodhart's.—The PRESIDENT remarked that he had never seen such a condition; and he asked if in Mr. Bryant's male case the distension and hypertrophy were as great as in Dr. Goodhart's.—Mr. BRYANT replied that they were as great, if not greater.—Dr. GREEN thought the case very obscure. He had never seen visible peristalsis in tabes mesenterica, and should rather expect to find the intestines paralysed in that condition. He also doubted whether chronic constipation due to loss of power could be followed by hypertrophy of the gut: the two conditions were so opposite.—Dr. GOODHART had seen visible peristalsis in one case only of tabes mesenterica. There was no proof of hypertrophy of the colon in Mr. Bryant's second case, and he thought that was the difference between hysterical and this paralytic dilatation; the one is not and the other is followed by hypertrophy. Dilatation and hypertrophy of the heart go on *pari passu* if the primary dilatation is not excessive. In cases of stricture of the bowel scybala are never found in the intestine above the obstruction, for the constant churning movements of the bowel erode the scybalous masses.

Dr. F. TAYLOR read a case of Right Hemiplegia after Scarlatina, with embolism of the middle cerebral artery, destruction of Broca's convolution without aphasia, and death from diphtheria. The patient was a boy aged five years, and was seized, two weeks after an attack of scarlatina, with hemiplegia of the right side. There was no aphasia, but the boy answered questions intelligently and in long connected sentences. There was sensation in the leg, but not at first in the arm, and there were occasional attacks apparently of the nature of convulsions. Two or three weeks later sloughs occurred on the back of the hand and fingers; later still the right arm and leg became œdematous, and the urine was subsequently found to be albuminous. About nine weeks after the onset of the illness he was attacked with nasal and pharyngeal diphtheria, of which he died in a few days. At the post-mortem examination there was found embolism of the left middle cerebral artery, with extensive softening of the left hemisphere, involving the posterior portions of the second and third frontal convolutions, the lower parts of the ascending frontal and parietal, the supra-marginal convolution, the island of Reil, the corpus striatum, and the anterior part of the inner capsule. The heart showed a few minute vegetations on the mitral valve; it was not dilated. The right kidney had two large embolic infarcts, and the right hand presented over the abductor indicis one large, irregular ulcer, the result of sloughing of the skin, and three small sloughs on the fingers. Dr. Taylor called attention to the frequent occurrence of cerebral hemiplegia in connexion with exanthems in children; in many instances no opportunity was afforded of demonstrating the exact manner in which the paralysis was brought about. Thrombosis of the cerebral vessels was regarded as a frequent cause; but the present case showed that obstruction of the vessels might also arise from embolism as a result of an acute cardiac disorder. In relation to the persistence of the faculty of speech, it appeared from the history that the child had been left-handed, in consequence of some enfeebled condition of the right arm, which was noticed from birth. This places the case in the category of those which seem to show that the speech centre is located on that side of the brain which is most educated for muscular movements. A third point of interest was the occurrence of diphtheria; its late appearance renders it probable that it was independent of the previous infection by scarlatina.—Dr. MAHOMED remarked that many cases of hemiplegia after the exanthemata are to be explained by the dilatation of the heart, with or without valvular disease, that frequently follows those diseases. He had recently observed cases of marked dilatation of the heart after scarlet fever. In a case of diphtheria that died from a dilated heart, he found thrombosis of the auricles and embolisms in many parts of the body, but not in the brain.—Dr. ALTHAUS thought the pathology of cases of hemiplegia after exanthemata obscure, but thrombosis and embolism were the most common cause. The destruction of Broca's convolution without aphasia was very interesting, but it was an apparent exception that really proved the rule.—The PRESIDENT regarded Dr. Taylor's case as very special, and quite different from the paralysis so common after diphtheria and typhoid fever. He had seen a good many cases of diphtheria occurring at an interval after scarlet fever; most of them were fatal.—Dr. TAYLOR replied that there was no evidence of dilatation of the heart at the autopsy; the signs of endocarditis were distinct, though slight. He did not bring forward this case as illustrating the sole cause of hemiplegia after exanthemata, but only one special form. It was an important question how exanthemata brought about the changes in the heart.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Perforation of Stomach in Hydrochloric-acid Poisoning.—Cerebral Embolism.—The Treatment of Genu Valgum.

AT the meeting on the 29th ult., F. J. Gant, Esq., President, in the chair—

Dr. GILBART SMITH exhibited a specimen of Perforation of the Stomach due to Poisoning by Hydrochloric Acid. The patient was a boy, aged six years and a half, who had swallowed about a tablespoonful of spirits of salts on the morning of admission into the London Hospital. Intense pain in mouth and throat was immediately followed by vomiting of dark-red matter. The vomited matters subsequently became colourless mucus, streaked with brownish material. There was much secretion from the mouth and fauces, deglutition was impeded, and there was great difficulty in breathing, especially in inspiration. There was much collapse, and death took place seventeen hours after taking the poison. The post-mortem examination revealed but little change in the buccal mucous membrane; that of larynx and trachea was red; the œsophagus of an ashy-grey colour; the mucous membrane of the stomach was red, except close to the pyloric end, where it was black, and in parts digested away; a perforation was found at the greater curvature, and there was recent peritonitis. The case was a typical one of poisoning by this acid, in which perforation occurred in about one-third of the cases. Death generally took place within twenty-four hours; in one case it occur in so short a time as two hours; and to a girl, aged fifteen, one drachm had proved fatal. The laryngeal symptoms were due to the irritation set up by the volatile properties of the acid.

Dr. DOUGLAS POWELL showed a specimen of Endocarditis which had been attended with Multiple Embolism. The case illustrated the fact that embolism of both middle cerebral arteries might take place without any definite symptoms marking the event.—Dr. SYMES THOMPSON referred to a case of advanced heart disease, where the patient was attacked by aphasia on two separate occasions; the first lasted less than a day, the second occurred six months after, and continued for several days. Death took place from pyæmia, but was preceded by embolism of the posterior tibial artery.—Dr. DOWSE questioned whether the infarcts were not due to thrombosis, owing to a general inflammatory condition of

arteries in these cases.—Dr. D. POWELL said that in most of the cases there was no evidence of a general arteritis.

Mr. S. BENTON exhibited a boy, aged thirteen, who had made a good recovery from severe Knock-knee, being treated simply by tenotomy and instrumental means. Before treatment there was a divergence of 15 inches between the internal malleoli, and he could not walk without great pain and difficulty. One year ago he was admitted into the North-West London Hospital, and was three months under treatment. Mr. Benton divided subcutaneously the biceps tendon of both legs, and on the left leg he also divided the external lateral ligament. The instrument devised by Mr. Henry Baker was employed. The legs are now straight, the joints are quite strong, there is no stiffness or impaired movement, and the boy can walk eight or nine miles without fatigue. Great stress was laid on the selection of a suitable instrument, and the need of personal supervision in the treatment.

Mr. RICHARD DAVY then read a paper on the Advantages of Ogston's Operation in the Treatment of Genu Valgum. He thought the present opportunity a good one for upholding this operation, as so much had lately been published on the respective value of splints, tenotomy, and osteotomy. He could not admit any superiority in "extra-articular" osteotomy (as described by Mr. Reeves), and narrated his own case of excision of the inner condyle of the femur in 1871 for confirmed genu valgum, as a proof that surgical attention had been directed towards that point. The joint was opened without antiseptic precautions; the boy made a good recovery, and can now walk ten miles a day. He warmly praised Ogston's ingenuity in suggesting the oblique division of the inner condyle by a valvular opening. The cases suitable for the operation were the confirmed cases, where the horizontal plane of the condyloid end of the femur is markedly at fault, and progression interfered with by brushing of the knees. The rationale of the operation and the manner in which the obliquity of the condyle is increased were described and illustrated. He strongly urged the importance of an early diagnosis, as in that way cutting operation might be anticipated. He then described the method of operating, and exhibited a knife with a groove in one side of its back for the introduction of Rose's saw. The after-treatment was simple, but it was necessary to re-educate the patient on a fresh balance. The results were complete, and he had never seen a fatal case. He summarised Ogston's cases in Aberdeen, and also recapitulated ten cases of his own—eight left knees, two right knees. Constitutional errors and general treatment must not be lost sight of, and no surgeon could be so specially interested in any one operation as to overlook the characteristics of rickets, and indiscriminately perform it; but the fully confirmed rickety habit should not forbid the operation. He summarised its advantages as follows:—1. It is an operation mechanically correcting a mechanical defect. 2. Its conduct is simple, safe, and satisfactory. 3. No special antiseptic precautions are needed. 4. Its good results are rapidly gained; the tendency towards aggravation of the deformity is lessened. 5. There is but a trivial risk to the patient, and the operative impression seems to be permanent. 6. All future instrumentation at the hands of the surgical mechanician is abolished. Mr. Davy showed a boy, aged fourteen, who had been operated on ten months and a half previously. His height had increased three inches; his malleoli touched (there had been a divergence of sixteen inches and a half), and he could walk eight miles a day. The operation is a grand resource in these protracted cases of genu valgum, and the fact that two knee-joints had been opened in the same patient at one sitting and the condyles sawn off is a striking example of the progress of modern surgery.—The PRESIDENT said the author had not laid sufficient stress upon the risks of the operation in relation to the after-condition of the joint and the life of the patient.—Mr. HENRY BAKER said that Mr. Benton's case was a severe one, and the result excellent; the strength of the joints showed that fears as to permanent weakness following tenotomy and division of the external lateral ligament were unfounded. He asked Mr. Davy what were the dangers of division of the biceps tendon, which he had said was as dangerous as Ogston's operation.—Mr. EDMUND OWEN regretted that the two cases exhibited had not derived their improvement—he could not term it *cure*—from splinting alone, in spite of its tediousness. He found flat-foot and genu valgum so frequently associated that he looked upon them in the light of cause and effect; but he attributed the immediate cause of the joint deformity to a giving way of the internal lateral ligament of the knee on account of its deriving little or no support from the adjoining fibrous structures; the internal lateral ligament had as allies the tendon of the biceps and the ilio-tibial band of fascia. Tenotomy had been spoken of as a trivial operation, and Mr. Davy urged that osteotomy even without Listerian precautions was less serious still; but no cutting operation should be lightly spoken of. He wished to know the ages of the patients on whom Mr. Davy had operated, as some surgeons had operated on children of two, three, and four years.—Mr. PEARCE GOULD called attention to Dr. Macewen's measurements in cases of genu valgum; he had found that the most frequent deformity was a curving inwards of the lower third of the femur or a lengthening of the inner side of the femur. The inner condyle is elongated in 84 per cent. of cases, but often to only a very slight extent. This was the explanation of the failure of Ogston's operation. Even in Mr. Davy's case there was an interval of five inches between the malleoli when the patellæ are placed directly forwards. In his experience he had never seen a severe case of genu valgum really *cured* by this operation. Mr. Barker had had a fatal case, and Mr. Gould had had a fatal case after osteotomy of the tibia. He had also seen suppuration of the joint, and stiffness; whilst Dr. Ogston himself mentions two out of eight cases with stiffness for months, and thickening round the joint. Dr. Macewen's operation was quite free from those dangers, and he believed it would soon completely replace Ogston's where osteotomy was necessary. No operation was perfectly safe; and certainly osteotomy could not be performed so perfectly subcutaneously as tenotomy.—Mr. ROYES BELL considered the case treated by instrumental means was most successful, but that it was not such a severe case of rickets as Mr. Davy's. Genu valgum was, no doubt, often associated with flat-foot, but the cases shown were very slightly affected; and many cases of flat-foot did not suffer from knock-knee. The osteotomies done at King's College Hospital were performed antiseptically.—Mr. WALSHAM could not agree that Ogston's operation was so safe as Mr. Davy avowed. He had seen a considerable number of patients treated by this method; and although many cases had been quite as successful as those of Mr. Davy, still he had seen very grave results follow—such as synovitis, suppuration of the knee, and one fatal case. Macewen's operation was the one now generally performed at St. Bartholomew's Hospital, and the one he most preferred.—Mr. DAVY, in reply, said five years and upwards was about the age of his cases, and pointed out the advantages as to time and convenience of operation compared with mechanical contrivances. He thought Ogston's would be the operation of the future.

Reviews and Notices of Books.

Demonstrations in Physiological and Pathological Chemistry. By CHARLES HENRY RALFE, M.A., M.D. Cantab. London: David Bogue. 1880.

THE subject treated in this book is one which we venture to say hardly receives sufficient attention in the medical schools. Whilst the incomplete character of the preliminary examinations of most of the licensing bodies compels the schools to undertake instruction in the very rudiments of inorganic chemistry, the pass examinations do not require any more than a very superficial knowledge of the chemistry of the animal body. This, it must be confessed, is a weak point in the present curriculum; for although certificates of attendance upon classes of practical physiology are enforced, the examinations mostly do not *practically* test the knowledge of the candidates, except, perhaps, in the department of histology, which is not physiological but anatomical knowledge. On the other hand, it is by no means uncommon for candidates to be well posted in the more intricate problems of physiology gained from theoretical study, and at the same time to be profoundly ignorant of even elementary facts in physiological chemistry. There can be no question as to the importance of the subject in its bearings upon practical medicine; and for this reason, if for no other, we regard the publication of this book as most timely, and think that

it will be found of great use as a laboratory guide on the subjects of which it treats.

The author tells us that the book is based upon the systematic instruction he has for some years given at St. George's Hospital, and he has arranged the subject in the form of demonstrations. The first of these may be taken as a type of the whole. It deals with the saccharine and amylaceous principles. After their enumeration and general characters starch is dealt with separately, and all its reactions given; then follows glycogen, a brief physiological statement preceding the description of its method of preparation and its characters; next comes glucose, and, finally, lactose and inosite, which are treated in the same systematic way. The chapter concludes with a list of the materials, reagents, and apparatus necessary for the demonstration. The same methodical plan pervades each demonstration, the second chapter dealing with the fatty principles, and the third with the albuminous. Under the head of "Products of Decomposition," a chapter is devoted to the properties of lactic acid, and the long series of substances derived from the splitting up of the albuminoid bodies—viz., xanthin, cystin, kreatin, leucin, tyrosin, hippuric acid, uric acid, and urea. In the fifth demonstration the subject of digestion is discussed, and the properties of the digestive fluids detailed in order. The next two demonstrations deal with the nutritive fluids (blood, milk, chyle, and lymph) and the solid tissues (muscle, nerve, and bone). The demonstration that follows is upon the urine, and is an excellent account, within a small compass, of the physiological and pathological conditions of this excretion. A classification of the causes and conditions under which the colour of the urine is altered is useful, and there is a full disquisition upon the causes in the fluctuations of the reaction of the fluid. The conditions under which variations in the urinary constituents occur are then pointed out, and the characters of urinary deposits—freely illustrated—are described. The abnormal products met with in morbid urine follow next, and we note in passing that as a test for blood Dr. Ralfe regards the "guaiacum test" as very unreliable, since globulin, casein, mucin, &c., will develop the blue reaction when blood is absent. We miss any detailed reference to indican, although it is mentioned under the head of colour, but it is found in so many conditions that its importance may be overrated. Analysis of urinary calculi concludes this section. A chapter upon quantitative analysis and the manner of carrying this out in the gravimetric and volumetric methods concludes the book.

Dr. Ralfe has succeeded in producing a book which should be very useful not only to the student but to the teacher, and to those practitioners who are able to devote their leisure to the study of an attractive and important subject. By following strictly in the lines sketched out by the author, the student will find himself possessed of a sound knowledge of animal chemistry in health and in disease.

The Atomic Theory. By AD. WURTZ, Membre de l'Institut, Doyen honoraire de la Faculté de Médecine, Professeur à la Faculté des Sciences de Paris. Translated by E. CLEMINSHAW, M.A., F.C.S., F.I.C., Assistant Master at Sherborne School. London: C. Kegan Paul & Co. 1880. (International Scientific Series.)

THE fame of this excellent scientific series will not be impaired by the present, its thirtieth volume. The publishers have been wise in their choice of a book, and particularly fortunate in their translator. Mr. Cleminshaw has performed his task with equal care and skill. The translation is accurate and yet smooth, French idioms are almost entirely absent, French scientific phrases are well rendered, and there are, on the whole, very few misprints. Of the latter we notice the following as having some importance, and as being easily corrected: Page 96, line 19, ethylene oxide should be ethylene; page 159, the atomic volume of gallium should be 11·7 instead of 1·17; page 202, line 3, for C_2H_5 read C_2H_4; page 253, the formula for potassium platinichloride is printed wrongly (probably the French author's error); page 257, line 20, for VOCl read $VOCl_2$; page 321, line 19, "hundredths of millionths" should have been "millionths." Some errors of this kind are, of course, unavoidable in a first edition.

In the book itself there is much to praise and a little to lament. The modern chemical theory, in the establishment of which M. Wurtz has helped so materially, is expounded with remarkable clearness and brilliancy and with extensive learning. The historical order has been adopted, and the growth of our knowledge of chemical composition, reaction, and constitution, and of the physical laws with which they are inseparably connected, is traced side by side with the growth of the atomic and molecular hypotheses by which the results of experiments have been explained and the experiments themselves in many cases suggested. The earlier chapters of the book are almost entirely satisfactory, and everyone with the most elementary knowledge of chemistry will read with pleasure and profit the story of the successive discoveries and theories of Proust, Richter, Lavoisier, Dalton, Gay-Lussac, Avogadro, Berzelius, Dulong and Petit, Mitcherlich, Gerhardt, Dumas, Cannizzaro, Williamson, Frankland, Wurtz, Kopp, Kekulé, Kolbe, and Mendelejeff, to quote only a few from the long and illustrious roll. We are glad to note that but little national bias is perceptible in the history, and although it is annoying to find the law of gaseous elasticity uniformly ascribed to Mariotte, who did not, instead of to Boyle, who did, discover it, we must remember that Mendelejeff, a Russian chemist, gets the whole credit of the periodic law to which Newlands, an English chemist, was the first to draw attention.

We have said that the earlier chapters are almost entirely satisfactory. Their chief defect lies in this, that the author throughout uses too much the tone of an advocate anxious to make the best of his case, and therefore apt to slur over the difficulties, many or few, which beset it. This tendency is more apparent in the later chapters, and we cannot help thinking that better service would have been rendered to science if the stumbling-blocks in regard to the theory of atomicity had been more fairly recognised. That the theory is in the main useful, and within certain limits probable, no one doubts; but that it is capable of giving a satisfactory explanation of all the facts of mineral chemistry is by no means so certain, and we are inclined to think that it breaks down altogether in regard to some. The combination of hydrochloric acid with ammonia, involving apparently the fixation of chlorine to nitrogen, the existence of double salts containing the chlorides of monad metals, and numerous other cases that might be quoted, cannot at present be explained, and the fact should be fairly admitted.

The later chapters contain a very interesting sketch of modern views and discoveries in regard to the constitution of matter, in which the ideas of Van't Hof and Le Bel, Claüsius, Clerk Maxwell, and, above all, Sir W. Thomson, are indicated. A fuller exposition of these hypotheses would be very useful just now.

The Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D. Third Edition. London: Smith and Elder.

THE appreciation of this work by the profession is shown by the call for a third edition within so short a period of its first publication. In the present issue several important additions have been made, which bring the work up to the present state of obstetric practice. We find in it a full account of

the Cæsarean section, with the modifications proposed by Porro, where, in addition to opening the uterus and the removal of the fœtus, the ovaries and uterus are also extirpated. A chapter is devoted to Laparo-elytrotomy, an operation proposed to take the place of the Cæsarean section, in which the advantages of the former over the latter operation, and the cases for which it is suitable, are clearly and ably set forth. In the chapter on Transfusion the observations of Schäfer, recently published, have been incorporated. The work has been carefully revised, and maintains its high position as one of the best text-books on midwifery.

New Inventions.

THE AROMATIC AND DEODORISING WATER-CLOSET.

THIS closet, the property of Messrs. Brazier and Son, 106, Blackfriars-road, presents some novel points. It is composed entirely of earthenware, and is in two pieces, the basin and the trap. The basin is of the ordinary conical form, with a flushing-rim. The trap into which it fits is an ordinary **S** bend, with a ventilating shaft leaving its highest point. The novelty consists of a subsidiary chamber, forming one piece with the trap, and communicating with it below the water-level by a small hole. There is a special plug-hole for "charging" this subsidiary chamber. The charging consists in putting some quicklime in the bottom and attaching a bag of camphor to the margin of the plug-hole. The water is then allowed to flow into the subsidiary chamber, and the level of the water is the same as in the trap. The plug is then replaced, and the only interchange between the trap and the chamber is by diffusion, for it is evident that no *flow* can take place from the chamber (in which the fluid is retained by atmospheric pressure as in a "bird fountain") into the trap. The chamber contains water saturated with camphor and lime, and if the water in the trap be not renewed too often that also becomes saturated with camphor and lime.

What the effect of a watery solution of camphor and lime may be upon sewer-gas or fæcal matter we must leave professed chemists to determine and practical men to find out after a fair trial of this novel invention, the name of which is strangely contradictory, for that which is aromatic cannot be without odour.

MEDICAL TRIALS.

EXCHEQUER DIVISION.

(*Sittings at Nisi Prius, before* MR. JUSTICE STEPHEN *and a Common Jury.*)

EATON *v.* BASKER AND OTHERS, COMMITTEEMEN, AND THE MAYOR, CORPORATION, ETC., OF GRANTHAM.

MR. DAY, Q.C., and Mr. Finlay were counsel for the plaintiff; Mr. J. C. Lawrance, Q.C., and Mr. Dugdale appeared for the defendants.

This was an action brought by a surgeon against two sets of defendants to recover £97 7*s.* 9*d.* for medical attendance supplied to the poor in certain fever tents at Spittlegate and Little Gonesby, near Grantham, during an epidemic of scarlet fever in July, August, and September, 1878. The defendants pleaded that this was not a contract under seal; that if it was a contract it was contrary to sec. 200 of the Public Health Act, 1875; and that the contract was not made by the Local Board of Spittlegate or Little Gonesby, or by the Corporation under their seal. But these defences were stigmatised by Mr. Day in his opening as the reverse of meritorious; and he laid stress on the fact that this was a very special attendance, as the fever tents were in a field, to isolate the patients, distant some one and a half miles from Grantham, where Mr. Eaton resided. It cut the plaintiff practically off from the rest of his practice, as few people would like to employ a doctor brought into such painful contact with a raging scourge as the fever then was, being of a particularly malignant type. While thus employed, the business of the plaintiff was almost wholly suspended. After arguments by counsel on either side as to the law of the case, Mr. Justice Stephen said he should allow the case to proceed, and the plaintiff was called, and deposed that Dr. Ashby, the medical officer of the sanitary authority, had applied to him to undertake the fever tents after a meeting in the Town-hall. At first he declined, as he believed it would injure his practice; but Dr. Ashby insisted that some one must do it, and the plaintiff suggested the names of several other well-known practitioners in Grantham. Whereupon the doctor replied they had most of them large and young families, and they much objected to running that risk; that the plaintiff must undertake the work, as he was the only bachelor in the profession in the town. Upon this the plaintiff consented, stipulating for half a guinea per day for the first two tents of six patients, and 5*s.* 3*d.* a day for every other similar tent. At first there was overcrowding, for Dr. Ashby had sent seventeen patients to the tents that properly held twelve. The witness had attended from June 30th to September 15th, sometimes seven hours a day, sometimes five or six, sometimes less; coming generally three times a day one and a half miles out of town. Out of sixty-five patients treated there only six had died. A correspondence was then read between the plaintiff and the secretary of the defendants, from which it appeared they had offered him at different times £58 and seven guineas, which sums, it was said, Dr. Ashby would pay after application and notice. The plaintiff added in his opinion his claim was a great deal too low.

Mr. Lawrance thereupon said he could not, on the part of the Mayor and Corporation, go on contesting the amount, some £30; but he submitted the committee were not personally liable, and the Corporation could not be sued on a contract not under seal.

Ultimately it was agreed to discharge the jury, and reserve these points of law for further consideration before his Lordship.

INFECTIVE PHTHISIS.

To the Editor of THE LANCET.

SIR,—The following, making due allowance for the ignorance and terminology of the period, looks so like a case in point, that if you do not think my estimate of it overstrained I will thank you to publish it in THE LANCET. It occurs under the head of "Catching an Atrophy," in Fitherbert's "Life of Cardinal Allen," and was taken by me from a little brochure, entitled "Cardinal Allen's Defence of Sir William Stanley's Surrender of Deventer," Chetham Society's publications, p. 60. The italics are mine, and the context implies, I think, that syphilis was not the cause of this "infection." However that may be, acute tuberculosis, or so-called galloping consumption, would appear to me to be the more appropriate interpretation; and I will only add, that I never saw or heard in India of the precautions against phthisis that Dr. Thompson mentions. "In those days [the reign of Elizabeth] a certain noble English youth, who had been entrusted to Alan's care at Louvain, had an atrophy, *his body gradually growing thinner.* As Alan, *assiduous in doing his duty*, remained with his pupil, he was also in a short time *infected with the same wasting away*, unnoticed at the commencement, for he was a man of vigour, *and yet the disease was not slight, as presently appeared;* for the poison was so attracted to the marrow, and so infused into the viscera, that besides infecting Alan with a disease which no course of time would cure, it so set at defiance all medicine, *that it threatened to bring him to a speedy death*, unless some escape . . . . might by chance be obtained from the goodness of his own native climate and soil. Therefore Alan . . . returned stealthily to England," and regained in time his former health, as we learn from other sources.

Your obedient servant,

Warrington, Nov. 1880 WILLIAM CURRAN.

THE LANCET.

LONDON: SATURDAY, DECEMBER 4, 1880.

WE are threatened with another epidemic extension of small-pox in the metropolis. The disease is becoming very active in the eastern districts, and it has already overpassed the hospital accommodation provided there for the isolation of cases. Indeed, the question of extemporising additional hospital provision is under the consideration of the authority most concerned in the matter, the Metropolitan Asylums Board. While this is the state of things as regards small-pox in the metropolis, the chief provincial towns, in comparison, continue remarkably free from the disease. The cultivation of small-pox would appear to be becoming a specialty of the Local Authorities of London in combination with the Central Authorities (we use the plural term advisedly), and it is high time that we had some more definite information than we yet possess regarding the probable causes of these recurring outbreaks. For we are almost equally at sea whether we attempt to get at the true meaning of them viewed either in the light of facts in the natural history of the disease, or in the light of the proper application of the effectual means we have at our command for its restraint. It is in the latter, the practical light, the subject has the most pressing interest, an interest all the more urgent inasmuch as in solving the one question we shall go far to solve the other also.

And first let it be remarked that there is evidently a strange hesitation on the part of the Central Authority, or rather batch of Authorities, the Local Government Board, to whom we can alone look for information on the subject, either to give this information, or, assuming that the Board does not possess it (which is probably the fact), to get it. In the outbreak of small-pox in the metropolis preceding the one now threatening, the outbreak of 1876-78, several efforts were made in the House of Commons to obtain the information needed from the President of the Local Government Board. Motions set forth with a view of obtaining a thorough investigation of the beginnings of the outbreak of 1876-78 were met by a promise to put upon the table of the House papers showing the actual state of vaccination in the several districts of the metropolis. Not that this change of form mattered much, for to this day the promised papers have not been forthcoming, and there would appear to be little hope of even this imperfect instalment of what was sought for now seeing the light. The President of the Local Government Board was not unwilling that it should be known generally that the metropolitan population was the worst vaccinated in the kingdom, owing, it was said, to the migratory habits of a large section of it, and the exceptional draft of imperfectly vaccinated or unvaccinated persons from other parts of the country into it. He was willing that it should be inferred that it was to this imperfectly vaccinated state the metropolis owed the frequently recurring serious outbreaks of small-pox to which it was exposed. But he was careful to avoid enlightening the House as to the particular incidences of this imperfection in the different districts of the metropolis; and altogether both he and his Department have displayed a marked desire not to ruffle the feelings of the local vaccination authorities, the Board of Guardians, by indiscreet disclosures. Yet, that there are disclosures to make about the way in which some of these authorities do their vaccination duties, and which it is desirable in the interest of the public should be made, is evident from the interviews which Dr. STEVENS, of the Medical Department of the Local Government Board, has recently had with Boards of Guardians in the east of the metropolis.

If the recurring outbreaks of small-pox in the metropolis are to be accepted as a gauge of its imperfectly vaccinated population (and in general terms we have little doubt that this is the case), it is to be inferred from the progress and character of the recent outbreaks that this imperfection is increasing rather than diminishing. Having regard to the circumstances under which public vaccination is carried out in the metropolis, there can be little wonder if such is the case. While professedly a public health measure, it is in reality a part of parochial administration, with all the narrow defects which attach to such administration. And notwithstanding that the central administration of public vaccination, both in its public health and parochial aspects, has been centred in the Local Government Board, the two aspects, in their administrative relations, are maintained as distinct as when they were attached to separate departments of Government. This want of a true union of the public health functions of the Board and its parochial functions is equally observed in every question with regard to small-pox in the metropolis, and underlies those serious difficulties which have sprung up in regard to hospitals for infectious sickness which are now impeding sanitary authorities in that matter.

Similarly the incoherent relations between the parochial and sanitary authorities of the metropolis and the Central Government contribute to the confusion and imperfection of action observed in public health matters. In fact, we see little hope of effectually dealing with the prevalence of small-pox and its recurring outbreaks, until, by a thorough investigation of the circumstances under which outbreaks like the one in progress occur, we are enabled to determine what part the shortcomings in the relations of the central to the local metropolitan governments play in the matter, and what share the derelictions of local authorities, sanitary and parochial, take in their several duties in respect to small-pox. When these things are known we have little doubt remedies for insufficiencies will be forthcoming. Meanwhile, under the peculiar circumstances of the government of the metropolis, small-pox is undesignedly cultivated in a fashion from which smaller communities appear to be free, and which is a scandal equally to the Central Government and to the Local Government.

ACCIDENTS are often important factors in scientific discovery. They demonstrate the effect of combinations of influences which previous knowledge would not have led the investigator to combine, and they thus reveal, not rarely, previously unsuspected facts. Dr. BROWN-SÉQUARD accidentally dropped some chloroform on the skin of a healthy guinea-pig, in the position of the epileptogenic zone of animals artificially rendered epileptic. To his surprise,

the guinea-pig had a severe convulsive seizure. Recognising, with characteristic readiness, the suggestiveness of the fact, he commenced a series of experiments on cats, dogs, guinea-pigs, and rabbits, the results of which he has communicated to the Académie des Sciences.

If chloroform is dropped on to the skin of one of these animals a reflex contraction of the subcutaneous muscles is immediately produced. The respiration, as a rule, rapidly lessens, the temperature falls, the animal becomes lethargic and sinks upon its flank or back, without any attempt to resume the normal posture. A condition nearly that of sleep comes on, usually gradually, sometimes almost suddenly. Later, especially in guinea-pigs, tremor occurs in all four limbs, commencing in the hind limb on the side opposite to that on which the irritant liquid has been applied. The two hind limbs are drawn forward, the thighs strongly flexed on the abdomen; finally, general muscular relaxation occurs in many cases, especially in cats, which become then absolutely anæsthetic. A cat was exhibited in this condition, giving no other signs of life than feeble movements of the heart and respiration. After a quarter of an hour, an hour, or sometimes three or four hours, the animal wakes up, begins to move, and gradually returns to the normal condition.

Besides the tremors, convulsions are sometimes seen analogous to those of spinal epilepsy. Twice there was pleurosthotonos; in four animals, a cat and three guinea-pigs, there was rotation; and in two guinea-pigs, not epileptic, there was a violent attack of general epilepsy. Other interesting phenomena were also observed. Two cats became delirious. Two distinct forms of hemiplegia were seen: one cerebral, consisting in more or less complete loss of voluntary movement, with slight anæsthesia, in the limbs on the side irritated by the chloroform; the other spinal, with paralysis and hyperæsthesia in the limbs on the side of the irritation, and anæsthesia in the limbs on the opposite side. Paralysis of the two fore or of the two hind limbs sometimes occurred. These different paralyses were accompanied almost invariably with paralysis of half or the whole of the abdominal wall. The seat of the paralysis varies according to the part of the skin irritated. General hyperæsthesia often supervenes, in guinea-pigs especially, and lasts one or two days. The reflex action is more or less diminished, especially on the side on which the chloroform had been applied. The pupils become contracted in the cat, and dilated in the other animals, especially in the dog. Some animals presented complete paralysis of the intercostal muscles, others of the diaphragm. In two dogs and in several guinea-pigs, when the thorax was opened, it was found that one phrenic nerve had lost its excitability. The corresponding half of the diaphragm presented also a notable diminution in excitability. It was always the phrenic nerve and the half of the diaphragm on the side opposite to that on which the chloroform had been applied which were thus paralysed, while in many cases the phrenic nerve and half of the diaphragm on the side of the application were found to be more irritable than normal. The excitability of the nerves and muscles of the trunk and limbs was modified in a remarkable degree. An extremely feeble galvanic current was suffered to stimulate them, and after death, the irritability persisted for a much longer time than under normal conditions. In guinea-pigs, for instance, the irritability persisted in the sciatic and brachial nerves three or four times as long as in animals the skin of which had not been irritated with chloroform. Another curious effect was the arrest of the exchange of material between the tissues and the blood, shown by a rapid fall in temperature, and pallor of the venous blood. Not only the peripheral nerves, but the spinal cord itself, acquired in many cases a remarkable morbid excitability. Moreover, a considerable congestion of the mesentery and of all the abdominal organs was found if the abdomen was opened before death. Lastly, two animals (guinea-pigs) died suddenly immediately the chloroform was applied to the skin—one by arrest of the heart, respiration continuing for some seconds, the other by simultaneous arrest of the heart, respiration, and of the exchange between the tissues and the blood.

This list of effects is a long and startling one, and, coming from a less eminent and experienced investigator, would probably be received with incredulity. From Dr. BROWN SÉQUARD, however, we cannot but accept the facts, however mysterious may be their explanation. He points out that they cannot be regarded as the result of the entrance of chloroform into the blood. Very little of the vapour could possibly be inhaled, and chloroform in the blood would only account for a small part of these varied consequences. The only explanation which is offered is that they are due to an effect on the nerve-centres of a special irritation of the nerves of this region of the skin.

In a subsequent communication Dr. BROWN-SÉQUARD has described some experiments made with the object of verifying the hypothesis that these results are produced through the agency of the cutaneous nerves. In several guinea-pigs he divided the spinal cord transversely at the level of the ninth dorsal vertebra, and then applied chloroform on one side of the sacrum and abdomen—that is, to the parts receiving their nerve supply from the portion of the spinal cord which had been separated from the brain. In other guinea-pigs, the spinal cord having been divided at the same level, he applied chloroform to the side of the thorax and neck. If the remarkable effects of the chloroform be produced by the agency of the blood, it is clear that they should occur irrespective of the position of the application in regard to the divided cord. But they were absent in the first series of guinea-pigs, and present in the second. Hence, it seems certain that the effect is not produced by means of the blood, but by the agency of the nervous system. Several interesting facts were observed in these experiments. When the chloroform was applied to the parts behind the section of the cord, there was no congestion of the abdominal organs, such as invariably occurs when chloroform is applied to the skin if the spinal cord has not been divided. It occurred, nevertheless, when the chloroform was applied to the skin of the neck and thorax above the level at which the cord was divided, no doubt through the agency of the splanchnic nerves. It was found, however, that the application behind the section inhibits the reflex action of the dorso-lumbar part of the cord; and that its spinal influence on muscular tonicity is also lost, so that the abdomen becomes distended on that side, much more than on the opposite side.

In other experiments the transmission of the effect to the brain was investigated in cases of hemisection of the cord

in the cervical region. After the division of the cord on the right side, with the usual effect of causing hyperæsthesia of the right half of the body and anæsthesia in the left half, chloroform was applied in some cases to the right, in others to the left side. In the former the cerebral symptoms rapidly supervened, of the full character above described. On the other hand, in the second series, when the application was made to the anæsthetic side, the phenomena were either absent or tardy in their appearance, and the congestion of the abdominal viscera was absent. Another point investigated was, whether it is possible to kill an animal in perfect health by the application of chloroform to the skin. He found that whenever the liquid has produced loss of consciousness, anæsthesia, and a notable fall in temperature, death occurs with certainty if the liquid is still applied to the skin.

Certainly the annals of experimental pathology scarcely contain another example of a series of effects so profound from a cause so slight. Dr. BROWN-SÉQUARD does not point out the bearings of his experiments on therapeutics, but they are sufficiently obvious and important. It is evident that the remarkable anodyne effect of chloroform and other agents applied to the skin in cases of neuralgia, even of central origin, may find their explanation in the influence which he has discovered and investigated in these most interesting observations, and which can doubtless be produced in varying degree throughout the animal kingdom.

IT must not be supposed from the fact that we have for some time past preserved a purposed silence on the subject of the private asylum system and Lunacy Law Reform, that the question originally raised by ourselves, and of late years freely discussed, with more or less wisdom, in the lay press, is not still engaging our attention. We are, in truth, pursuing researches of a very exhaustive kind in ways and by agencies more likely to give us a full and clear view of the subject than any we have previously been able to employ. It would be premature to say more at present, but in justice to the profession, and more particularly that section of it which is engaged in asylum practice, it is right to state that our long-standing conviction is confirmed, and we must adhere to an opinion which has to a great extent placed us at variance with the majority of Lunacy Law reformers—namely, that it is the system, rather than the way in which it is worked, or the persons working it, which most urgently demands the impartial scrutiny of the Legislature. It will be exceedingly unfortunate if the subject is not discussed on a proposal made by the Government during the approaching session; and our immediate object in reopening the question in these columns at this period of the recess is to point out the need of at once pressing the matter on the attention of the Cabinet.

The glaring and more mischievous faults of the present arrangements are specifically three: First, the loose mode of *certifying*. It is as true now as it ever was that any two medical practitioners—neither of whom need have heard a lecture on insanity, read a page in any work on the subject, been asked a question at any examination, or even seen a case of lunacy—can at will, and after a single visit, without consultation, or time or opportunity for reflection, sign a certificate which in many instances must be worse than a death warrant, branding the person so certified with a life-long mark of social disability. It is, we protest, monstrous that the certified opinion of any practitioner of the art of Physic should have the force of a legal warrant for imprisonment; and that it should deprive the person named therein of personal liberty, self-support, and all that makes life pleasurable, without appeal. It is not necessary that any such certificate should be signed, and if it were otherwise it would not be fair to ask medical men to sign it. We are concerned with the study and amelioration of disease; and we do not desire to be interrupted in our scientific pursuits to perform this most unsavoury service. The notion that "certifying" patients insane offers the smallest safeguard to the public is purely chimerical. The protection needed is an efficient and sufficient inspection of asylums such as this country has never yet enjoyed. How long public opinion will rest content with the formal system of visiting carried out by the Board of Commissioners in Lunacy as at present constituted we will not venture to predict; but the fact cannot be gainsaid that, except in so far as the existence of a Commission in Lunacy results in the publication of systematic reports, and therefore keeps the subject of asylum-management before the public, it is practically useless. No more restraint is necessary in the treatment of a case of lunacy than in the management of a case of febrile excitement or delirium tremens. We are not asked to certify in the one class of cases; why should we be in the other? The safeguard against sane persons being put away in asylums must be the perpetual surveillance of these establishments, and such an arrangement as shall make those who act as "keepers" public officers publicly responsible.

This leads us to the second point—namely, the *private-asylum system*. It is, we once again assert, opposed to all the interests of law and of public safety that the power to imprison any person, sane or insane, self-controlled or carried away by an idea, should be entrusted to private persons. We have abolished sponging-houses for debtors; it remains to put an end to the system of allowing private persons to keep lock-up houses for the insane, as a matter of commercial business and in the way of profit. Nothing short of a complete and sweeping change of this system will suffice. Asylums ought to be put on the footing of *hospitals* so far as the treatment of mental disease is concerned, and the individuals to whose discretion the management is committed should be on the footing of public officers, gaining nothing by the detention or the discharge of their patients, either in money or prestige. It is useless to mince matters. The public asylums everywhere have their faults; they are too large, too palatial, wholly unlike the "homes" of their inmates; and they are conducted less as *hospitals* than as refuges. All these evils are deplorable, and they mar or hinder good medical work. Meanwhile, however, the private asylums are incomparably worse, not in themselves or as establishments, but because they rest on a wrong foundation, are organised on a bad principle, and place the medical man in charge—whether he be the proprietor or only *employé*—in a false and humiliating position. He cannot keep his patients long enough to assure their recovery without being suspected of acting from unworthy motives, and he cannot discharge them without subjecting his establishment to a loss which may or may not

be speedily compensated by the admission of new cases, but which is, as far as it goes, a pecuniary sacrifice to the business of the "boarding-house." It is wrong that this should be so, and nothing but harm can come of it.

The third of the three cardinal evils to which we have alluded lies in the *difficulty of getting patients out of asylums* when once they have been incarcerated, whether their admission was necessary or made in error. No assurances given by the Commissioners on this point can, or should, have the smallest weight with the public. What the Board means when it asserts that few, if any, cases of mistake have come under its notice is simply that, with very rare exceptions, the certificates sent to the Commissioners are fully made out and technically satisfactory, and that the keepers of asylums do not often (!) complain to them of patients being improperly placed in their establishments. It would be strange, indeed, if matters were not satisfactory, and if the most unqualified assurances were not forthcoming in respect to both these particulars. As a matter of fact, the Commissioners in Lunacy do not even see—as the official eye is gifted to see—anything like the "total" of patients that pass through these asylums. There are large middle-class institutions which, as the official Reports show, are not "visited" more than once a year, and not always thus frequently, whereas the majority of the cases "discharged on recovery" or "transferred," or who have "died" in asylums of all classes, reach the termination of their imprisonment, in one or other of these ways, "within six months"! We are speaking of the *system* with the general average of its consequence. We protest it is wholly bad. The difficulty in getting patients out of asylums is the fruit of the facility which exists for getting them in. Until the law relating to "certifying" is repealed and reconstructed there can be no satisfactory and sufficient change in the condition of the insane as regards the probability of their prompt discharge on recovery, or the frank avowal that an error has been made, and passing disturbance mistaken for permanent disease.

We will not pursue the subject further into detail on the present occasion, but we are anxious it should be recognised that, so far as we are concerned, the subject is not shelved. We shall not rest content until the whole question has been amply discussed in Parliament, and the profession and the public have had all the facts set clearly before them, and had their say.

THE last meeting of the Council for 1880 of the Metropolitan Hospital Sunday Fund was held on Tuesday at the Mansion House, under very favourable auspices, which call for a few words of notice. The first thing to observe in reviewing the history of the Fund this year is that a larger collection has been realised than on any previous year. In 1874 the total of the Fund was £29,936; in the present year it reached £30,423. Not only was there a considerable increase in the individual donations, but also in the number of contributing congregations. We may venture to hope that with further improvement in the commercial condition of the country the amount of the collection will yet further increase. Two or three other points in the history of the Fund for the year augur well for the future. The unsectarian character of the Fund has been well shown by the vindication of Rule 4. This rule, requiring that every institution shall be managed by a duly-appointed Committee, is of the utmost importance. It was elicited at the meeting on Tuesday that other institutions besides the Eastbourne Convalescent Home—which, by the way, has in this respect amended its constitution—are out of harmony with Rule 4. Sir SYDNEY WATERLOW explained that an intimation to this effect will be made to the institutions in question, so that they may have ample time before the distribution of next year to put themselves into the position of public institutions managed on public principles. It is evident that institutions managed by two or three persons, without meetings of subscribers and without a committee elected by and at such meetings, are, whatever their usefulness, only private establishments. Another point in respect of which the Hospital Sunday Fund is working well is in the difficult matter of Surgical Appliances. The charities which profess to provide these appliances are known to require a number of letters from subscribers, whose money value represents the value of the instrument or appliance required, so that, as in an instance stated at the meeting on Tuesday, a man rpquiring an artificial leg may have to travel all over the town for fifty letters before he can obtain that necessary adjunct. Last year it was resolved to set aside 1 per cent. of the Hospital Sunday Fund for the prompt relief of such cases. This has worked so well that the Council unanimously decided henceforth to set aside 2 per cent. of the Fund.

Finally, the Fund will be continued for the next twelve months under the most cordial support and sanction of the Lord Mayor, Alderman MCARTHUR, who, on Tuesday, expressed a strong wish that it should again be accommodated with quarters in the Mansion House, as at the beginning. Ever since the Fund has been obliged to have its own offices it has been favoured with the kind interest of two Lord Mayors and the use of the Mansion House for council meetings. But it will now again have its local habitation there with all the advantage which such an association gives it. The Council naturally passed a very warm vote of thanks to the Lord Mayor for this marked kindness, and will best show their appreciation of it by redoubled efforts to increase the Fund and maintain its impartial administration. We thus leave the Fund for the present, not without satisfaction in remembering that we ourselves made some special effort before the collection to emphasise the needs of the hospitals of London and the duties of London churches in reference thereto. The annual meeting of the constituency of the Fund is fixed for Dec. 20th.

Annotations.

"Ne quid nimis."

THE MEDICAL CURRICULUM.

NOTWITHSTANDING all that has been said and written and proposed during the past ten years, the problem of medical education still remains unsolved. Indeed, it would seem that each year it becomes more intricate and complicated. Numberless schemes of reform have, from time to time, been proposed, but few of them have had a really practical basis. Abuse has been lavish and general; at one time the student has been blamed, at another the teacher, and nearly always the examiner. The truth is, the system as a whole is wrong, and none of its parts work smoothly.

In another column will be found a sensible, though startling, proposal by an experienced teacher and examiner. Mr. Savory very properly ascribes the chief defects of the existing system of medical education to the fact that too much is attempted in the comparatively brief medical curriculum. Three remedies are available: either to lessen the number of subjects, or to lower the standard of attainments, or to prolong the period of study. Of these three courses only the last can be regarded as finally satisfactory. Few persons will maintain that the medical student or practitioner can know or learn too much. Each and every subject included within the curriculum is more or less essential to a complete education. What is needed is, an adequate prolongation of the compulsory course of study. Nor is this recommendation so much of an innovation as might at first sight appear. In the days of apprenticeship a course of training and education extending over six or seven years was the rule; it is only since the system of apprenticeship has grown into gradual disuse that the time for study has been clandestinely and almost illegitimately curtailed. The time formerly spent in pupilage has been saved without any corresponding extension of that passed at a medical school. Failing a *bonâ fide* apprenticeship (and there is much to be said both for and against this), six or seven years at a medical school cannot be held by reasonable persons to be too long for the professed elaborate education of the medical student of modern times.

THE EXCRETION OF INDICAN.

MUCH attention has lately been directed to the mode of origin of a substance which has been demonstrated to be one of the normal constituents of urine—indican. Its nature, and the conditions of its excretion, have been the subject of investigation by many writers since Schunk, in 1857, called attention to it, and the facts which have been ascertained have been well summarised and added to by Dr. H. N. Heineman in the *Archives of Medicine* for August. Indican has been separated from the urine in the form of white shining masses, by Bauman and Brieger, who class it in the aromatic series, to which phenol and benzol belong. It is a compound body, composed of indigo-blue, indigo-red, indigo-glucin, leucin, and acids. Nevertheless it does not give any colour to the urine, except in rare instances, and then the colouration is due to decomposition by a ferment, either before or after being voided from the bladder. A blue tint is observed, due to the liberation of indigo-blue, crystals of which may be found in the urine. The ease with which it undergoes this decomposition renders its detection in the urine easy, and also furnishes a means of its quantitative estimation. Hoppe-Seyler has found that the amount of indigo-blue produced is definitely proportioned to the amount of indican. Hence, if the indican is decomposed by hydrochloric acid, and the indigo-blue dissolved out in chloroform, the tint of the solution affords an index to the amount of indican. It is usual to add some calcium hypochlorite to the solution, which completes the decomposition of the indican, and intensifies the colour.

The source of indican, according to the researches of Jaffe, Kuhne, and Salkowski, appears to be a nitrogenous body called "indol"—the substance to which the peculiar odour of fæces is due. It is a product of the decomposition of albuminous substances when acted upon in the intestine by the pancreatic juices. Christiani has shown that if indol is injected hypodermically into the lower animals, the excretion of indican is thereby increased. Ewald, in a case of artificial anus, withdrew the secretions from the upper part of the small intestine, and found that then no indican appeared in the urine. The excretion has been found to be increased by a prolonged and exclusive meat diet. It is possible that it is derived also from other sources, and it is conjectured that some may come from the blood, which furnishes, as far as we know, all the other colouring matters of the body. Many diseases which are attended with a diminution in the hæmoglobin of the blood, cause also an increase in the excretion of indican, and the two may be observed to coincide in time. It is thus evident that we have much more yet to learn regarding this substance.

The new observations which have been supplied by Dr. Heineman constitute an important addition to our knowledge. He has examined the excretion in upwards of 200 cases, of which 150 were cases of disease. He has added these to the cases examined by Hoppe-Seyler, Senator, and Hinnige, making a total of nearly 400 from which to draw conclusions. One hundred and forty-nine of the observations were on the excretion in health, and indican was found in all but 14, that is, in about 90 per cent. In nearly half Heineman's cases there was an increase above the average, and in one-fifth there was a marked increase. It seems, therefore, probable that the kind of diet must be taken into consideration in every case. Certain diseased conditions were found to produce a decided increase. The most marked excess was found in the diseases which affect the alimentary canal, and especially the small intestine, whether local diseases or general diseases with a local lesion. There was a marked increase, for instance, in dyspepsia, gastro-duodenitis, chronic constipation, intussusception, diarrhœa, peritonitis, cholera, lead-poisoning, and typhoid fever. In diseases causing inanition, phthisis, and scrofulous bone disease, an increase is also found. Although some diseases in which there is a reduction in the hæmoglobin of the blood cause an increase, there are curious, and at present mysterious, variations in the effect of diseases of this class. Thus, malaria, syphilis, rheumatism, alcoholism, progressive anæmia, and chlorosis, even when the blood-change is profound, do not always cause an increase in the excretion of indican. Further observations on this class of disease are needed to ascertain the conditions under which the excretion varies. There is a marked increase in certain nervous disorders—insanity, epilepsy, Addison's disease, progressive muscular atrophy, and paraplegia, and also cases of disordered function of the kidneys, as in chronic Bright's disease. The diseases, however, in which the most uniform and marked increase is met with are internal malignant tumours—sarcoma and carcinoma.

Theoretical reasons have been offered in explanation of these pathological variations, but our knowledge is at present too inadequate to furnish grounds for safe hypothesis. A suggested explanation of the increase in peritonitis, constipation, &c., which has been founded on the experiments of Jaffe, seems probable. He found that when the small intestine was tied the amount of indican in the urine was increased. This seems to show that a mere retardation of peristalsis may, by promoting the absorption of indol, increase the indican. Hinnige suggested that other diseases act through the nervous system, and produce a change in the nature of the pancreatic secretions, but it has been shown by Brieger that indol may be produced without the agency of the pancreatic juices, and by Senator that it is unquestionably a product of decomposition. It is possible that observations on the excretion under the influence of various drugs may throw further light on its origin.

THE LONDON FEVER HOSPITAL.

THE appeal of the noble President of the London Fever Hospital should not be forgotten as the season of Christmas arrives. Only medical men, perhaps, know the useful work which this hospital does, how it sends its ambulance for, and opens its doors to receive, fever-stricken servants, or members of families, and so not only provides for them, but

delivers the remaining members of such families from terrible risks, and the general public from wider extensions of disease. It is impossible to overstate the convenience and utility of this institution. Its claim on the public is not the less strong that it takes a payment for each patient; for those in the general wards two guineas, their cost to the hospital being eight; and for patients in private wards three guineas a week, which just suffices to pay their cost. It will thus be seen that the hospital is a charity of the very best kind. It charges patients, but it makes no profit. So far from doing this the noble Duke tells us that for the last six years the hospital has had to be carried on by the annual sale of about £2000 of its funded property. It is easy to see what the end of such a state of matters must be if the benevolent public does not step in with aid. There is one most tempting rule of this fund—viz., that a governor paying a guinea a year can have a servant admitted without charge at the discretion of the committee. We most heartily commend the urgent appeal of the Duke of Devonshire to the wise and benevolent of the public.

EFFECTS OF CARBONIC OXIDE ON ANIMALS.

AT the last meeting of the Académie des Sciences, M. Gréhant read a paper giving the results of a series of experiments he has made upon the absorption of carbonic oxide by the living animal, and showing how he has been enabled to determine exactly the smallest proportion of this gas which proves fatal to different animals. He states that he first introduced into a large gasometer a homogeneous mixture of air and carbonic oxide, containing 1-400th of the latter gas. A dog weighing 15 lb. was compelled, by a properly arranged apparatus, to breathe this for the space of fifty-six minutes. At the expiration of this period, the muzzle being taken off, it remained lying for a few moments, then rose and walked about. A drop of the blood, examined with the spectroscope, showed that the bands of absorption of oxycarbonised blood were present. On the following day the same animal was made to respire a rather stronger mixture, containing 1-350th of the carbonic oxide gas; the experiment lasted forty-five minutes. The animal remained lying, and was only able to rise after the lapse of some minutes. On the following day, again, a mixture containing 1-300th of carbonic oxide was supplied to it. At the expiration of fifty minutes the respiratory movements stopped. The animal died without the least agitation. It had respired 146 litres of the mixture. One hundred cubic centimetres of blood taken from the inferior vena cava was only able to absorb 6·8 cc. of oxygen, proving that the hæmoglobin was almost completely oxycarbonised, and hence that for the dog the precise lethal dose was 1-300th of carbonic oxide. In experiments on another animal of the same species and weight the lethal dose was found to be 1-250th of the gas. This difference seems to explain how it is that when two persons are exposed to an atmosphere impregnated with carbonic oxide one may die whilst the other survives.

M. Gréhant finds from similar experiments on rabbits, exposing them successively to mixtures of air and carbonic oxide, containing 1-500th, 1-400th, 1-300th, 1-200th, and 1-100th of carbonic oxide, that even the last high proportion does not prove fatal to them. A mixture containing 1-70th was breathed for forty-eight minutes; the animal remained resting on its side for some minutes, but then rose and moved about. The proportion of 1-60th, however, proves fatal to the rabbit. It hence appears that great differences exist between different species of animals in regard to their resisting power to the action of the gas. In experiments with a stove without a chimney M. Gréhant finds that the combustion of two kilos of carbon of wood, in a chamber having a cubic capacity of forty-five metres, was sufficient to partially poison a dog to such an extent that the absorbing power of the blood for oxygen, which normally amounts to 23·2 cc. per 100 cc. after two hours and a half was only able to absorb 12·4 cc. of oxygen, so that 10·2 cc. of oxide of carbon had been fixed by each 100 cc. of blood. Under these conditions a guinea-pig would have died, since 1-500th proves fatal to that animal.

SCARLET FEVER IN CHRIST'S HOSPITAL.

CHRIST'S HOSPITAL (the Blue Coat School), with its 700 and odd inmates, is now suffering from scarlet fever, after a long immunity from any considerable prevalence of the disease. In fact, during the ten years 1870–79 in no year did the number of cases which occurred in the school exceed four (1874 and 1877), while in seven years one case only happened in each year, and two cases in one year (1870). But on the 11th of the past month (November) of the present year four cases of scarlet fever took place among the boys, followed by six more in the next three days. From the 15th to the 20th there were no fresh cases; then from the 21st to the 25th thirteen more boys sickened of the disease—apparently showing an incubation period of about seven to ten days. The infection appears to have been introduced into the school from the playground, the most careful inquiry having failed to show any more probable source. It has been determined by the school authorities to leave the decision of retaining the healthy children in the school or sending them home, to their parents, and a circular has been issued to this effect. As a consequence, a large number of the children—about 250, we understand—has been withdrawn. We trust that the school authorities have taken means to insure that they receive information as to the subsequent history of these children in respect to scarlet fever. It has been long held of this disease that the dispersion of schools under these circumstances contributed to spread the infection more widely and more speedily through the country. From that point of view the future history of the children who have gone home will be of great interest, not only as furnishing information with regard to the doubtful point in preventive medicine, but as a guidance to the school authorities, should they unhappily be placed in a similar unfortunate position in the future. The type of the malady in the hospital is, we are glad to learn, of the mildest, while the scholars remaining are placed under the most favourable circumstances for avoiding the disease, or such as may contract it for passing through its course with least detriment to themselves.

THE LATE DR. HUDSON.

AT a meeting of the Professors of the School of Physic, held on Nov. 25th, it was unanimously resolved, "That the Professors of the School of Physic in Ireland desire to place on record their sense of the great loss which medical science in Ireland has sustained by the recent death of Alfred Hudson, M.D., late Regius Professor of Physic in the University of Dublin. The Professors further desire to convey to Dr. Hudson's widow and brother their hearty sympathy with them in their present trial."

At a special meeting of the directors of the City of Dublin Hospital, held last week, the following resolution was unanimously adopted:—"That this Board has heard with deep sorrow of the death of Dr. Alfred Hudson, Physician-in-Ordinary to the Queen in Ireland, the consulting physician of this hospital, and they beg to convey to Mrs. Hudson their expression of sympathy and regret."

At the opening meeting of the Dublin Obstetrical Society on Saturday last, the Rev. Dr. Haughton referred to the loss which the country and profession had sustained in the death of Dr. Hudson, and moved, "That the Obstetrical Society of Dublin desire to record their sense of the loss that medical

science has sustained in the death of Dr. Alfred Hudson, and to convey to his widow and brother their warm sympathy in their deep bereavement." Dr. Kidd seconded the resolution, and said they were all deeply sensible of the loss the public and the profession had sustained by the death of so able a man. The resolution was passed in silence, and the secretary was directed to forward it to the family of the deceased gentleman.

The Committee of the Meath Hospital have also passed a resolution sympathising with Dr. Hudson's family in their bereavement.

THE EFFECT OF EXERTION ON TEMPERATURE.

DR. BONNAL of Nice has been experimenting on the effect of muscular exercise on the temperature of the body. The observations were made on four individuals, the temperature being taken in the axilla, popliteal space, groin, foot, hand, mouth, and rectum. The investigation has been prosecuted during four years, and the conclusions reached are the following:—All muscular exercise, even if of short duration, raises the temperature of the rectum, rarely, however, to a point exceeding 101° F.; but the rise occurs invariably, at whatever hour the exercise is taken, whether before or after rest, and independently of age, sex, and meteorological conditions. The effect bears no relation in degree to the duration of the exercise, or to the apparent fatigue. The influence of the same exertion, under identical conditions, varies in different individuals, and in the same individual at different times. The physical altitude, the state of the atmosphere, and the amount of clothes, exercise, as might be anticipated, a marked influence on the degree, and especially on the rapidity, of the rectal rise in temperature. On the other hand, however, the absence or abundance of perspiration has no appreciable influence on the variations in temperature during movement. Rest, after a given exercise, always determines a fall in the rectal temperature, more considerable and more rapid the shorter the exercise. All exertion which causes a great acceleration of the pulse and respiration lowers the peripheral temperature (mouth, axilla, groin), but the fall is immediately recovered from on rest, the rectal and peripheral temperatures becoming equalised, or resuming their normal difference—about two-thirds of a degree Fahrenheit. The greatest elevation by exercise which was met with amounted to 103·2° F., in the case of a celebrated runner, aged thirty-one years, who had just run eleven miles in an hour and a half without stopping, and without any other effect than an elevation of the pulse to 145. If the rectal temperature is below 98·6°, a moderate exertion, such as a gentle walk of a mile on level ground, raises the temperature up to the normal, even though the necessary rise amounts to 1½° F. But if the temperature is already above 98·6°, the same exercise will not raise the temperature more than ·4° or ·8° F. In a rapid ascent the greatest elevation of temperature almost always occurs during the first half hour; if the ascent is continued, the temperature may remain stationary, may be raised ·2°, or may fall ·2° or ·3°. Some other observations which corroborate the fact that gymnastic exercises cause a rise of temperature are not of special interest. The account of the investigations has been communicated to the French Académie des Sciences.

A JURY ON UNQUALIFIED ASSISTANTS.

AT an inquest touching the cause of death of George Beighton, of Marsh Gate, Doncaster, the jury found that he died of erysipelas, and expressed their disapproval of medical men leaving unqualified persons in charge of their patients. The coroner stated that he had received a letter from Mr. Jessop, of Leeds, giving the assistant, Mr. David Allison Bradbury, a very good character. Doubtless Mr. Jessop had good grounds for doing this; but it is nevertheless indefensible for a surgeon to leave an unqualified *locum tenens* in charge for three weeks. Beighton, in driving to Walworth, in a state of intoxication, fell from his cart and incurred a severe bruise of the right temple. Mr. Bradbury, thinking, as he said, there was pus, made an incision, which bled more or less, according to the evidence of the deceased's wife, till death. It is not clear whether the man died of erysipelas or hæmorrhage. Mr. Bradbury says there were no veins in the neighbourhood of his incision! But one thing is clear, as the jury said, that unqualified assistants should not be left in charge of patients for any length of time.

PROFESSOR LISTER.

IN his presidential address at the Royal Society on St. Andrew's Day (Nov. 30th), Mr. Spottiswoode thus referred to the work of Professor Lister with which his name and fame are more particularly associated:—

"One Royal Medal has been awarded to Professor Joseph Lister, F.R.S. Mr. Lister's claims to the honour of a Royal Medal are based upon his numerous and valuable contributions to physiological and biological science during the last thirty years. Condensed into a single sentence, the merit of Mr. Lister consists in the generalisation to living matter of the results obtained by Schwann and Pasteur with dead matter. He began with cases of compound fracture and with abscesses. In simple fracture the wound is internal, the uninjured skin forming a protecting envelope. Here nature works the cure after the proper setting of the injured parts. In compound fracture, on the other hand, the wound extends to the surface, where it comes in contact with the air; and here the operator can never be sure that the most consummate skill will not be neutralised by subsequent putrefaction. In the earliest of his published communications, Mr. Lister clearly enunciates, and illustrates by cases of a very impressive character, the scientific principles upon which the antiseptic system rests. He refers to the researches of Pasteur, and shows their bearing upon surgery. He points to the representative fact then known, but unexplained, that when a lung is wounded by a fractured rib, though the blood is copiously mixed with air, no inflammatory disturbance supervenes; while an external wound penetrating the chest, if it remains open, infallibly causes dangerous suppurative pleurisy. In the latter case the blood and serum are decomposed by the microscopic progeny of the germs which enter with the air; in the former case the air is filtered in the bronchial tubes, and all solid particles are arrested. Three years subsequently this inference of Professor Lister was shown to be capable of experimental demonstration."

"NUTRICINE."

A NEW method of preparation and preservation of meat in a small bulk has been described to the Paris Académie des Sciences by M. Ed. Moride. The details of the process are not published, and it is not, therefore, possible to form a critical estimate of its practical character, but it promises to be of value if the statements of its inventor can be relied upon. It consists in treating, in special apparatus, finely-divided meat, together with certain "nitrogenised alimentary substances," which have the property of absorbing the constituent water of the meat, and perhaps of forming with the meat certain organic compounds, still undetermined; the whole is then dried at a low temperature and powdered. There results a yellowish powder of an agreeable taste, which will keep indefinitely if not exposed to moisture or to a great heat. By mixing it with mucilage, albumen, or fats, tablets or cubes of any size can be prepared for various culinary or nutritive purposes. The powder is said to contain all the elements of raw meat in their natural condition, so that blood thus treated preserves all its properties of solubility, colour, and coagulation on heating. Nevertheless, the solution in cold water of the prepared blood does not decompose for several

days. In the preparation the meat is not cooked, and so it is in a state ready for digestion. Weight for weight it is more nutritious than meat, since it contains no excess of fat and no tendinous structures, and, moreover, the three-fourths of water removed are replaced by the same proportion of slightly cooked farinaceous substances, which contain, besides hydrocarbons, 2 per cent. of nitrogen. Hence nutricine contains 5 per cent. of nitrogen; whereas the meat from which it was prepared contains only 4 per cent. It is suggested that, by this process, the refuse of slaughter-houses will yield a useful food for dogs, pigs, and fowls.

SHAM PROVIDENT DISPENSARIES AND UNQUALIFIED ASSISTANTS.

THE *Evening Standard* gives a correspondent an opportunity of warning the public against what he calls sham provident dispensaries, basing his charges on reports of two inquests which had recently appeared in our contemporary, the facts of which he thus summarises:—"Two women are deceived into joining a so-called provident dispensary, are treated by an unqualified man, and die under circumstances necessitating an inquest." There can be no reasonable doubt that the writer in the *Standard* warns those who would be provident and who go to cheap dispensaries against a real danger. It cannot be denied that a very large number of these dispensaries are conducted by unqualified persons, though nominally belonging to registered practitioners. If such practices go much further, it will be the duty of coroners to hold still more frequent inquests, and to bring the facts under the notice of the Government. Meantime sensible people should ask themselves how it is possible to be supplied with educated opinion and medicines for a week for a sum that would not pay for half a week's beer.

THE ROYAL HOSPITAL FOR INCURABLES.

THIS hospital held its annual meeting a few days ago at the Cannon-street Hotel, and had the benefit of a little criticism from one of the subscribers, Mr. Alsagar Hay Hill. Critics are an unpopular class at public meetings of charities. And so Mr. Hill seemed to prove. Nevertheless we think this hospital would do well to give a little more heed to reasonable criticisms and complaints. To take, for example, even the rough figures of expenditure and work—these would really be the better for some explanation. Thus we have legacies from £2471 to 19 guineas in the course of the year. The receipts for the year, with the balance from last year, were £25,108 17*s*. This is a very large sum to have to use. It is expended on 183 inmates and 419 pensioners; or, to speak more strictly, £23,744 7*s*. 4*d*. was expended. If we allow twenty pounds each to the pensioners, this leaves £15,364 to be spent on 183 inmates, or over eighty-three pounds a year for each. This seems to us a large sum for cases housed together. When, in connexion with this large expenditure, we consider the costly mode of election and admission, we cannot but regret that a hospital with so good an object should be so open to criticism and so little thankful for it.

EDWARD GOODEVE MEMORIAL FUND.

A MEETING of the friends of the late Deputy Inspector-General Edward Goodeve, M.B. Lond., Honorary Physician to the Queen, was held at Connaught-square, Hyde-park, London, on November 18th, Deputy Inspector-General F. J. Mouat in the chair, at which it was unanimously resolved—"That subscriptions be invited for the purpose of raising an 'Edward Goodeve Memorial Fund,' to be devoted to the purchase of a marble bust for the Calcutta Medical College, and the endowment of a Scholarship in connexion with the Professorship of Medicine in that school." The following gentlemen were nominated as an executive committee to carry the resolution into effect:—Inspector-General J. Forsyth, C.B., Q.H.P. (President); Surgeon-General Sir Joseph Fayrer, M.D., F.R.S., K.C.S.I.; Surgeon-Major A. Grant, F.R.C.S., Q.H.S.; J. H. Matthews, Esq.; Deputy Surgeon-General S. B. Partridge, F.R.C.S. (Honorary Treasurer). The General Committee is to consist of Dr. Goodeve's former colleagues at the Medical College and such other friends as may be willing to act.

Subscriptions (not to exceed two guineas) to the fund may be paid to Messrs. Grindlay and Co., 55, Parliament-street, Westminster; to Messrs. Grindlay and Co., Clive-street, Calcutta; or to the hon. treasurer, Deputy Surgeon-General S. B. Partridge, Thicket Lodge, Thicket-road, Anerley, London, S.E.

THE BIRKENHEAD SEWER ACCIDENT.

THE adjourned inquest on the death which occurred in the Birkenhead sewers a short time ago was held on the 25th ult. Dr. Vacher, the medical officer of health, gave evidence to the effect that the deceased labourer had lost his life from the inhalation of sulphide of ammonium generated by the sewage, and he expressed the opinion that the ventilating openings in the sewers were too far apart—in other words, that the sewers were insufficiently ventilated. It appeared from other evidence that the sewers contained much deposit, and needed frequent periodical flushings, which had not been given. The jury gave a verdict in accordance with Dr. Vacher's evidence of the cause of death, and added the following presentment:—"We consider the Corporation have been guilty of great neglect in permitting such an accumulation of sludge in the sewer as has been elicited in evidence, and that such a deposit ought not at any time to be allowed to exist."

VETERINARY SURGERY.

WE have much pleasure in learning that, in the forthcoming session of Parliament, a Bill is to be introduced for the protection of the title of Veterinary Surgeon, conferred by two separate charters on the graduates of the Royal College of Veterinary Surgeons, the first dating so long ago as 1844. Such an Act is greatly needed, as the country swarms with men who have no right whatever to the title—indeed, anyone may adopt it with impunity. People perfectly unacquainted with medicine or surgery—coachmen, grooms, farriers, blacksmiths, &c.—dub themselves Veterinary Surgeons, and even Members of the Royal College of Veterinary Surgeons; and thus not only impose on the public and cause serious loss, but cruelly maltreat animals. It is astonishing the Royal College of Veterinary Surgeons has not moved in the matter long ago; but we are gratified to find that the present president, Mr. George Fleming, Army Veterinary Inspector, has taken up the question, and we may be sure nothing will be left undone to carry it to a successful termination. It is one in which the medical profession has an interest, and it should receive their support.

RABIES IN IRELAND.

RABIES still manifests itself in Ireland, and it is probably extending. On September 3rd an artillery horse had to be destroyed at Kilkenny in consequence of the disease. It had been bitten on the nose at the Curragh camp on July 4th by a mad dog, which ran amuck among the horses and people there. A characteristic symptom presented by the poor creature was intense itching at the seat of injury. On November 21st great excitement was caused at Kilmainham by the rushing about of a mad dog, which was not killed until it had succeeded in biting two

men and a dog. One of the men, a labourer, it seized by the thumb. Then dashing into Island Bridge barracks past the sentry, it entered the quarters of Lieutenant Aylmer, of the 19th Hussars, whom it caught by the left arm, inflicting a severe bite. It was eventually destroyed by a police constable.

PATHOLOGICAL SOCIETY OF LONDON.

THE Debate on Rickets will be resumed at the meeting of the Pathological Society on Tuesday next. Specimens of fœtal rickets will be shown by Dr. Barlow and Mr. Shattock, and microscopical specimens by Dr. Turner. Drs. Dickinson, Gee, Moore, Baxter, and Longhurst, and Messrs. Haward, Parker, and Lucas are expected to speak; there is thus hardly any prospect of bringing the discussion to a close on this occasion.

THE usefulness of the object aimed at by the St. John Ambulance Association—that, namely, of imparting instruction to public servants and others in the best modes of affording first aid to the wounded—appears to be receiving hearty recognition all over the country. Dr. Palk, surgeon to the Southampton Borough Police, has been lecturing on the subject; Dr. Stiven, of Sunderland, has inaugurated an ambulance class at Ferry-hill; and the movement seems to have gained great popularity in Dublin, where Major Duncan, in the presence of the Lord Major, a few days since presented certificates to a large number of successful candidates.

SIR BENJAMIN COLLINS BRODIE, Bart. (son of the late distinguished surgeon), who died at Torquay on the 24th ult., was born in 1817, was educated at Harrow, and took his B.A. degree at Balliol College, Oxford, in 1839, and his Mastership of Arts in 1842. He was appointed to the chair of Chemistry at Oxford in 1855, and became President of the Chemical Society in 1859–60. The deceased was a Fellow of the Royal Society, and was created D.C.L. of his *alma mater* in 1872.

FROM the sixth annual report of the Syndicate appointed to superintend the examinations in State Medicine at Cambridge, it appears that at the October examination nine candidates presented themselves in Part I and eight in Part 2, five of whom passed in both. The small average number of candidates for this examination has suggested the necessity of some change in the arrangements under which it is conducted, or the raising of the fees.

MR. A. BREEDON WADE, M.R.C.S. Eng., formerly house-surgeon to the Royal South Hants Infirmary, and recently acting in that capacity until his successor should be appointed, was, on his leaving the institution, presented by the officers, nurses, and servants, with a handsome stationery cabinet and writing-desk, as a mark of the esteem in which Mr. Wade is held by the donors.

ANOTHER "bogus" institution has been exposed in America called the "New England University of Arts and Sciences." The University was incorporated by the New Hampshire Legislature in 1875, but the charter was repealed in the following year. The diplomas were, it seems, chiefly medical, and cost from 100 to 145 dollars.

DR. BARTHOLOW, of the Jefferson College Medical School, has introduced a new feature in his method of teaching therapeutics. A laboratory has been fitted up in the College, and the students are taught practically how to compound and manipulate drugs.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Craven (*Combined District*).—The several reports of Dr. Frederick W. Barry on the sanitary districts (three rural and five urban) entering into the Craven combination, and sundry special reports on parts of these districts, have been published in one volume. We know no series of reports which more completely fulfil our notions of what the reports of a medical officer of health should be, and we would especially refer to the report on the Settle rural sanitary district as a model of the sort of report which should be aimed at in such districts. The greater number of the reports were noticed in THE LANCET at the time of their presentation to the sanitary authorities; others have been delayed in their appearance until their publication in the present volume.

The entire series of reports as here presented must prove invaluable to the combination of districts to which they relate, and will be found full of interest to medical officers of health and sanitary officers generally. We regret to say they will be the last reports that will be received from the pen of Dr. Barry as the medical officer of health of an English sanitary combination, at least, for some time to come. Dr. Barry has accepted the appointment of sanitary commissioner with the Government of Cyprus, and we are fain to congratulate that island on an acquisition which we most unwillingly have lost after just proving its value.

Rotherhithe.—The first annual report which Dr. Browning, as medical officer of health for the parish of St. Mary, Rotherhithe, has been called upon to make, and which only now sees the light towards the close of 1880, is for the year ending December, 1878. It is issued with the annual report of the Vestry for the year ending March 25th, 1879, but even when published in this association it is not easy to understand why its general distribution should have been so long delayed.

Dr. Browning introduces his report by a brief description of the sanitary condition of Rotherhithe in the past as compared with the Rotherhithe of the present. In 1856, he tells us, the various local governing bodies in the metropolis were first authorised to appoint "medical practitioners of skill and experience" to act as their advisers in matters of public health. Rotherhithe was then supposed to be one of the most insalubrious suburban districts. It was almost entirely unsewered, marshy, with a scanty water-supply, and that "so contaminated as to be usually refused even by horses from other parts of the town which had to bait while passing through it." Further, it had within its boundaries fifteen miles length of open, fetid, stagnant ditches, serving as watercourses and cesspools. Its population of 15,000 was mostly packed into "a narrow river-side street, backed generally by blind alleys and courts, amidst which numerous offensive manufactories flourished unchecked, and where the various agues, fevers, and other communicable diseases could at any time be seen without protracted quest." The average annual death-rate of the parish was then 30 per 1000 population, and the fever-rate 23 per 1000. There was no public recreation ground, no provision for systematic removal of nuisances, nor for isolation of infectious diseases. This was the state of things in 1856. How different now! Rotherhithe with its 33,000 inhabitants, its 5000 houses having foundations below Trinity high-water mark, and its two miles and a half of foreshore, we learn from Dr. Browning, can vie as to airiness, dry, gravelly subsoil, cleanliness, good drainage, water-supply, and sanitary improvement generally, with any workmen's quarter in the metropolis. There are no open ditches, and malarious illness is unknown. Noisome trade factories exist only on two or three sites, which possess certain prescriptive rights. Finally, Rotherhithe possesses a public park which attracts visitors from all parts of South London; communicable disease, as a rule, visits its precincts more lightly than those of its neighbours, its annual death-rate for the last decade averaged only 18·6 per 1000 population, and its fever-rate 3·6 per 1000, so that while the district had doubled in numbers of inhabitants and in density per acre, the mortality had diminished by nearly one-half.

Such are the great results of twenty-three years' intelligent sanitary administration of Rotherhithe. Dr. Browning's report for 1878 proves that the results as affecting the health of the inhabitants are being steadily maintained, and that even a higher state of health than has yet been attained will probably be secured in the future.

Wolverhampton.—Mr. John Harry Love, the medical officer of health for Wolverhampton, in his report for the year ending September 30th, 1880, records the lowest number of deaths which have occurred during any year for the past eight years. Moreover, there had been no epidemic during the period to which his report refers, and there was a further reduction in the mortality from preventable disease. Yet, satisfactory as this may be, much, he observes, has to be done in the town from a hygienic point of view. The following remark on infantile mortality deserves quotation:—"Many assign as the different causes [of this mortality] errors of diet and delicacy of infants; doubtless these have their place in the list, but I am constrained to add that it may in the main be traced to the scourge of this country, *drunkenness*. For where do we find premature birth, marasmus, inanition, atrophy, diarrhœa, and convulsions most prevalent but in the wretched, squalid hovels of the drunkard, the dissipated, and the indolent?" Mr. Love assigns the improved health of Wolverhampton to the abolition of the old midden system, the adoption of the pan system of excrement disposal, the better water-supply, and the removal of many surface nuisances.

Bradford, Yorks.—The medical officer of health's (Mr. Butterfield's) report for the summer quarter shows a birth-rate equal to 31·7 per 1000 persons estimated to be living in the borough, as against 35·8 and 31·2 in the corresponding periods of 1878 and 1879; and a death-rate of 22·4, as against 22·3 and 16·8 in the two previous corresponding quarters. In a severe epidemic of scarlet fever, it is remarked, the fever hospital proved of great advantage, and greater willingness was shown by parents to send their sick children there.

THE METROPOLITAN ASYLUMS BOARD.

The report of the meeting of the Metropolitan Asylums Board, on the 27th ult., shows in the most striking way the anomalous position in which that Board is placed with reference to the provision of hospital accommodation in London. A Poor-law body, it has thrust upon it the most important sanitary functions, and is still required to act on the strictest Poor-law lines. Moreover, the advice tendered to it by the Local Government Board is wholly based upon poor-law tradition and practice, and as completely purged of public-health considerations as if the Central Board had no public-health responsibilities. This determined maintenance by the Local Government Board of poor-law relations solely with the Metropolitan Asylums Board, virtually ignoring the general sanitary functions they must unavoidably perform, has been the cause of much inefficiency of action already, and is about to be the cause of further inefficiency of action in the near future. The Central Board, in its endeavours to bring the action of the Asylums Board into some sort of agreement with that of the sanitary authorities and the sanitary requirements of the metropolis, appears simply to succeed in worrying and irritating the latter Board, handling its leading-strings in a feeble and vacillating fashion, humiliating to a body of which puerility is the last thing to be predicated. Here we are at the beginning of another epidemic of small-pox, with the existing accommodation for the disease exhausted before the epidemic is well declared. Not only this, but it is proposed by the Asylums Board to rent the only sanitary hospital existing in the East of London, and so (with the approval of the Local Government Board) turn to folly the action of the one sanitary authority there—the Poplar, which had done its duty in providing hospital accommodation. The Local Government Board still fails to reconcile its public health and its poor-law functions, and as a consequence exposes both sorts of authorities to untold annoyances in their relations with it. We sympathise with the Metropolitan Asylums Board in its most anomalous position.

THE METROPOLITAN WATER-SUPPLY.

Colonel Bolton, R.E., the water examiner, reports for the month of October that the water in the Thames at the intakes of the several water companies was good from the 1st to the 6th October, when it became very bad, and remained so to the end of the month. The water of the river Lea was generally bad throughout the month. Filtration, although carefully attended to by the companies, failed to free the Thames water from the effects of organic matter, principally arising from vegetation brought down by the very heavy floods which prevailed during the greater part of October. The remarks attached to the tabular statement given respecting each company appear, however, to indicate that the filtration was of better quality than is here implied. The water from the Lea, after filtration, seems to have been "generally clear."

Colonel Bolton is getting "bothered," we are glad to see, with the chemical analyses of waters, from several independent analysts, which he multiplies in his reports, and which, not being comparable with each other, are of very doubtful utility. He again urges that "a standard of quality" should be adopted, and directs attention to the intermediate fouling of water which is apt to occur in storage cisterns.

AN IMPORTANT AND SUCCESSFUL EXPERIMENT IN THE ISOLATION OF SCARLET FEVER BLURRED.

We regret to find that the most interesting experiment which has yet been made in England in the isolation of infectious disease has given rise to legal proceedings on the part of a medical man intimately connected with it. We refer to the experiment tried by Dr. Ashby, medical officer of health for Grantham and the neighbouring districts, of dealing with an outbreak of scarlet fever in that town during the summer of 1878, by means of isolating the patients in tents. He prevailed upon the local authorities to erect a tent hospital on the outskirts of the town, and induced parents to send their sick there. The experiment was most successful. Parents availed themselves of the tents largely (their early prejudice against them being readily overcome), the patients admitted to the tents did remarkably well, and the spread of the disease was unquestionably much curtailed. Altogether the example set was one which deserved to be copied, and showed with what readiness the spreading diseases of children may be dealt with by the exercise of energy and forethought. Unhappily, we now learn this unique experience is defaced by the fact of the medical officer who had charge of the hospital having to take legal proceedings against the local authorities to recover the money due to him for his attendance. We print the case as it now stands elsewhere.

Sir Richard Cross, in answer to a communication from the Local Rights Association respecting the Artisans and Labourers' Dwellings Improvement Acts, 1875, addressed to him when Home Secretary, attributes the present imperfect working of the Act in the metropolis to the administrative authorities rather than to the original legislation. Many of the defects in the working might be remedied, he believes, by more cordial co-operation between the vestries and the Metropolitan Board of Works.

It is currently reported that the local authority of Maidstone has ingeniously contrived to produce *two* cases of typhoid fever in the town at a cost of £50,000—in other words, that the new system of sewerage it has constructed at this cost has, through the foul air coming from the ventilation-shafts of the sewers, produced this result. We are to infer that before the sewerage was completed typhoid fever was unknown in the town.

Bridlington Quay appears to have got into difficulties about a new system of sewerage, and discontented inhabitants are making known their grievances in the local press. The Local Government Board has even been appealed to, but it has replied to the complainants that the question at issue is one in which it cannot interfere, and must be settled between the local authority and the citizens themselves.

The Sanitary Committee of St. Saviour's, Southwark, have agreed to the presentation of a memorial to the Home Secretary praying that a Bill may be introduced into Parliament requiring the local medical officer of health, in all cases where no certificate of the cause of death has been given by a legally qualified medical man, or no inquest has been held, himself to give a certificate.

Although Birmingham possesses five mortuaries it is complained that they are little used, the people displaying great antipathy to the sending of corpses there.

An outbreak of fever is reported from Southport, said to be dependent upon the conveyance of infection through a milk supply. The milk was derived from a farm in the Ormskirk rural sanitary district, and the Rural Sanitary Authority is co-operating heartily with the Southport Corporation to put a stop to further mischief from this source.

Notice has been given that a Bill will be submitted to Parliament during the next session which will contain provisions for enacting a Water-Trust for the metropolis, and for giving to this Trust ample powers for entering into arrangements with the existing Water Companies for the acquirement of their works and for obtaining water from other sources.

The Native Guano Company, we learn, has been engaged in making some experiments at Lincoln, with the object of abating a nuisance arising from the sewage of the County Hospital. It is reported that the experiments have been successful, and that by the adoption of their process it will be possible to deal with the sewage without creating a nuisance.

We learn from the medical officer of health of the Brownhill's Urban Sanitary District, Staffordshire, Mr. David Edgar Harris, that seven deaths only occurred in the district during the month, representing a death-rate of 7·7 per 1000 inhabitants per annum. This is, indeed, a singularly low rate of mortality for a large mining district.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality showed a slight increase last week. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4874 births and 3175 deaths were registered last week. The births were 311, and the deaths 100, below the average weekly numbers during 1879. The deaths, however, showed an increase of 131 upon the low number returned in the previous week; and the annual death-rate per 1000, which had been equal to 22·8 and 21·2 in the two preceding weeks, rose again last week to 22·1. The lowest death-rates in the twenty towns last week were 16·7 in Bradford, 16·7 in Portsmouth, 18·0 in Brighton, 18·5 in Leeds, and 18·9 in Birmingham. The rates in the other towns ranged upwards to 25·3 in Salford, 25·7 in Plymouth, 25·9 in Sunderland, 26·1 in Nottingham, 28·7 in Liverpool, and 29·5 in Wolverhampton. During the first eight weeks of the current quarter the death-rate in these twenty towns averaged 22·1 per 1000, against 22·0 in the corresponding periods of the four years 1876–9.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 474 and 367 in the two preceding weeks, rose again to 405 last week; they included 162 from scarlet fever, 62 from measles, and 55 from fever, principally enteric. The annual death-rate from these seven diseases averaged 2·8 per 1000 in the twenty towns, and ranged from 0·7 and 1·1 in Plymouth and Birmingham, to 5·6 and 7·6 in Salford and Sunderland. The fatal cases of scarlet fever, which had been 163 and 138 in the two previous weeks, rose again to 162 last week, and showed the largest proportional fatality in Sunderland and Nottingham. Measles was most fatal in Salford and Leicester. The highest death-rates from enteric fever occurred in Salford, Sunderland, Portsmouth, and Liverpool. The 17 deaths from diphtheria in the twenty towns included 11 in London and 3 in Portsmouth. Small-pox caused 21 more deaths in London and its outer ring of suburban districts; but no death from this disease was recorded in any of the nineteen provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had increased in the four preceding weeks from 77 to 182, further rose last week to 210, a higher number than has been under treatment in these hospitals since the end of July last. The number of new cases of small-pox admitted to these hospitals, which had been 31 and 99 in the two preceding weeks, were 57 last week. The Highgate Small-pox Hospital contained 19 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had been 421 and 332 in the two preceding weeks, rose again to 367 last week, but were no less than 116 below the corrected weekly average; 221 resulted from bronchitis, and 104 from pneumonia. The annual death-rate from lung diseases was equal to 5·2 per 1000 in London, and 7·1 in Liverpool.

In the twenty towns last week 65 deaths were registered without the production of the certificate of a registered practitioner or the holding of an inquest; these were equal to 2·0 per cent. of the total deaths. The proportion of uncertified causes of death did not exceed 1·2 per cent. in London, whereas it averaged 2·8 per cent. in the nineteen provincial towns. No uncertified deaths were registered in Brighton, Portsmouth, or Norwich, while the largest proportions occurred in Sunderland, Wolverhampton, and Sheffield.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week was equal to 24·7 per 1000, against 23·8 and 20·9 in the two preceding weeks, and was 2·6 above the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged last week from 17·5 and 21·1 in Perth and Dundee, to 32·1 and 33·2 in Greenock and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 125 and 95 in the two previous weeks, rose again to 112 last week; they included 37 from scarlet fever, 20 from diarrhœa, 17 from whooping-cough, 14 from measles, 14 from diphtheria, 10 from fever, and not one from small-pox. The annual death-rate from these seven diseases averaged 4·5 per 1000 in the eight towns, and exceeded by 1·7 the average rate from the same diseases in the twenty English towns. In the eight Scotch towns the zymotic death-rate last week ranged from 0·5 and 1·3 in Aberdeen and Dundee, to 7·4 and 8·0 in Paisley and Leith. The fatal cases of scarlet fever in the eight towns, which had been 53 and 45 in the two preceding weeks, further declined last week to 37, of which 18 occurred in Edinburgh, 8 in Leith, and 11 in Glasgow. The 20 deaths from diarrhœa showed a marked excess for the time of year, and included 8 in Glasgow and 4 in Paisley. The deaths from whooping-cough, measles, and diphtheria also showed a considerable increase upon recent weekly numbers. This increase was most marked in Glasgow, where 12 of the 14 fatal cases of diphtheria were recorded. The deaths referred to fever, which had been 20, 14, and 12 in the three preceding weeks, further declined to 10 last week, of which 4 occurred in Glasgow, 3 in Edinburgh, 2 in Greenock, and one in Paisley. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 154 and 137 in the two preceding weeks, rose to 166 last week. The annual death-rate from these lung diseases was equal to 6·7 per 1000 last week in the eight Scotch towns, against 4·7 in London; the highest death-rates last week from these diseases in the Scotch towns occurred in Glasgow and Greenock.

HEALTH OF DUBLIN.

The death-rate in Dublin showed a marked increase again last week. The annual rate of mortality from all causes in the city, which had been equal to 30·6 and 33·3 in the two preceding weeks, rose again last week to 37·8. During the past eight weeks of the current quarter the death-rate in the city has averaged 34·8 per 1000, against 21·4 in London and 22·4 in Edinburgh. The 228 deaths in Dublin last week exceeded the number in the previous week by 27, and included 42, or 18 per cent., which were referred to the seven principal zymotic diseases, showing an increase of 17 upon those returned in the previous week; 17 resulted from fever (including typhus, enteric, and simple), 11 from scarlet fever, 6 from whooping-cough, 4 from measles, 2 from diarrhœa, 2 from small-pox, and not one from diphtheria. The annual death-rate from these zymotic diseases was equal to 7·0 per 1000 in Dublin last week, against 2·8 in London and 5·7 in Edinburgh. The deaths referred to fever, which had been 7 and 10 in the two previous weeks, further rose to 17 last week; the annual death-rate from this cause has averaged 1·4 per 1000 in the city during the past eight weeks, against 1·1, 1·5, and 1·0 in the first three quarters of the year. Fever has been since the beginning of the year exceptionally fatal in Dublin. The 11 deaths from scarlet fever in the city last

week showed a considerable increase upon the numbers in the two previous weeks. The fatal cases of measles and of whooping-cough were also more numerous. The deaths of infants in the city showed a further decline last week, whereas those of elderly persons exceeded the number returned in any week since the middle of February last.

AUSTRALIAN VITAL STATISTICS.

The colony of Victoria has recently issued its Statistical Register for the year 1879, which has been compiled by the Government Statist, Mr. H. H. Hayter. As regards tabular arrangement and fulness of detail these statistics leave little to be desired, and it is only to be regretted that want of faith in the trustworthiness of the materials from which they are constructed should to so large an extent destroy the interest which would otherwise attach to their publication. This Statistical Register consists of a series of tables, which, as we have said, are excellently arranged, but they are unaccompanied by any explanatory remarks, which might throw light upon some of the figures that undoubtedly require explanation. The mean population of the colony of Victoria in 1879 is estimated at 888,500; the annual rate of marriages, births, and deaths, per 1000 of the population, during the year is given as 5·6, 30·2, and 13·6 respectively. With regard to the rate of marriages, we find by doubling it that the rate of persons married in the colony in 1879 was 11·2 per 1000, against 14·4 in England and Wales; this figure would not seem suspiciously low, except for two facts that throw doubt upon its accuracy. In the first place, the marriage rate has steadily declined in the colony during the past eleven years from 13·6 in 1869, to 11·2 in 1879; and secondly, the marriage rate in about half of the entire population classed as extra-urban is returned at but 4·6 per 1000. We certainly doubt that in a population constituted as is that of Victoria, the marriage rate would steadily decline during a period of eleven years; neither is it probable that among the nearly half a million of persons living in the extra-urban districts the marriages should scarcely exceed the rate of 2 per 1000 of the population. We are forced to take exception on very similar grounds to the Birth and Death statistics; the figures show an almost similar decline in the birth-rate and death-rate of the colony during the eleven years 1869–79. The recorded birth-rate, which is given as 37·4 and 38·3 in 1869 and 1870, is said to have declined to 30·6 and 30·2 in 1878 and 1879. So with the death-rate, it has rapidly and steadily declined from 18·8 in 1875 to 13·6 in 1879. The death-rate is suspiciously low throughout the eleven years, and added to this we find that the urban rate in 1879 did not exceed 18·7, while in the extra-urban population, of nearly 430,000, the rate is given at the almost incredibly low figure of 8·1 per 1000. Bearing in mind the remarkable, and altogether unusual, steady decline in the rates of marriages, births, and deaths during the eleven years under notice, it appears impossible to avoid the conclusion that the Government Statist has considerably over-estimated the population of the colony; he has unfortunately omitted to state the method which has been used in arriving at the estimate, and there is, therefore, no possibility of judging of the trustworthiness of the estimate, except through the calculated rates. There is only one other way that suggests itself for explaining the low and declining rates of marriages, births, and deaths in Victoria in recent years; this is, defective registration of the marriage, birth, and death facts, which in the more sparsely populated portions of the colony is probably unavoidable. It may readily be believed that the age constitution of the Victoria population residing in the extra-urban districts would render it liable to a low death-rate, but it is difficult to believe that if all the deaths were registered, and the numbers of the population were more accurately known, the annual death-rate would be found to be so low as 8·1 per 1000.

HEALTH OF SWITZERLAND.

The Federal Statistical Bureau has issued its quarterly summary of vital statistics relating to the three months ending 30th September last. These returns deal with an aggregate population estimated in the middle of this year at nearly half a million of persons living in the twenty Swiss towns, with upwards of 7000 inhabitants. It appears that during the three months ending September last the annual death-rate in the aggregate population of these twenty towns averaged 22·8 per 1000, showing a further decline from the rates in the four preceding corresponding quarters, in which they had steadily decreased from 25·0 to 23·6. Among the several towns the annual rate in the quarter ranged from 12·0 and 12·9 in Geneva and Locle, to 25·9 in Basle, 27·2 in Herisau, 27·7 in St. Gallen, and 29·2 in Einsiedeln. No less than 710 deaths in the twenty towns during the three months were due to the seven principal zymotic diseases, being equal to 27 per cent. of the deaths from all causes; in the main, however, this zymotic fatality showed a decline from that which prevailed in recent summer quarters. Only three fatal cases of small-pox occurred during the quarter, two in Chaux-de-Fonds, and one in Zurich. The deaths from typhus and enteric fever were more numerous than in either of the two preceding summer quarters, owing to epidemic fatality in Basle and in the district around Zurich, where scarlet fever and diphtheria were also fatally prevalent. Although fever was more fatal last quarter than in the summer quarters of 1878 or 1879, it was very considerably less fatal than in the corresponding periods of 1876 and 1877. It is worthy of note that, with one or two exceptions, all the causes of death in the quarter were duly certified and attested.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE SOURCE OF TYPHOID FEVER: AN INSTRUCTIVE CASE.

The Vestry of Lambeth and its medical officer of health have been much perturbed by a certificate given by Sir W. Jenner and Mr. Dee Shapland to the effect that a fatal case of typhoid fever that had occurred in the district, and had been attended by them, was probably caused by the imperfectly-arranged drainage of the house in which the patient lived, and implying that the local sanitary authority had been neglectful. Dr. Archer Farr has published a pamphlet purporting to show that Sir W. Jenner and Mr. Dee Shapland had been wholly misinformed as to the drainage arrangements of the house in question; that the local authority had been far from unmindful of its duties in the house when there had been occasion to exercise them; and that in all probability the fever had been contracted at the patient's place of business in the City, where the drainage arrangements appear to have been as bad as could well be, where the medical officer of health writes of the premises as having "long been a source of trouble and anxiety" to him, and where a brother of the principal contracted an illness, presumably from this source, about the same time when Mr. Dee Shapland's patient sickened, and which illness, at the time of Dr. Archer Farr writing his explanatory pamphlet, was suspected to be typhoid fever.

EXCESSIVE MORTALITY AMONG SOUTH-SEA ISLANDERS IN QUEENSLAND.

A report has been published by the Legislative Assembly of Queensland on an excessive mortality amongst the South-Sea Islanders engaged on certain sugar plantations in Maryborough. The reporters were Dr. John Thomson and Mr. C. J. Hill-Wray, and they disclose a very unsatisfactory state of things among the labourers in the plantations, who are recruited from the South-Sea Islands. It would appear that there is no proper security that the recruits brought over are of sufficient maturity to undergo the heavy labours of a plantation, and that the hours of work are too protracted, the accommodation provided too often ill-considered, the water-supply bad and wanting during the period of work, and the diet at times insufficient both in quantity and quality. It is not surprising then to find fatal sickness prevalent among the Polynesians, and that "dysentery" is a prevalent disease among them—a term, however, which, not dictated by a medical attendant, appears to include pulmonary consumption accompanied by diarrhœa, enteric fever, and, as the reporters had an opportunity of observing, even scurvy. Poor feeding, bad water, overwork, and the absence of proper care when sick, were, in the opinion of the reporters, the causes of the excessive mortality which had been brought to the notice of the Colonial Government, and there is little likelihood of these causes being removed until the Legislative Assembly has given more efficient protection than it has hitherto done to the unfortunate islanders.

We regret to see, from the *Daily Picayune* (New Orleans), that the State Board of Health of Louisiana and the National Board of Health have disagreed about a question of quarantine. We trust that the disagreement arises rather from a misapprehension of facts than from any dissent from the general policy of the National Board.

It is proposed to give the inhabitants of Painswick, near Stroud, a free water-supply, using for the purpose of procuring it a bequest of £5000 left to the town by Mr. F. Gyde.

THE SERVICES.

THE ROYAL MILITARY ACADEMY, WOOLWICH.

Surgeon-Major G. J. H. Evatt, M.D., has been appointed to succeed Surgeon-Major Roberts as Medical Officer to the Royal Military Academy, Woolwich. Dr. Evatt has recently arrived from Afghanistan, where he had been in charge of one of the field hospitals with the Cabul Field Force for the last two years.

Brigade-Surgeon J. Ekin, M.D., is appointed to the administrative charge of the Allahabad Division, with the officiating rank of Deputy Surgeon-General.

Brigade-Surgeon J. Hanbury is appointed to the Rawal Pindi Division, with the officiating rank of Deputy Surgeon-General, *vice* Deputy Surgeon-General A. Smith, C.B., on sick leave.

Sickness has considerably increased in the Candahar Force since the inactivity and reaction after the siege and late battle with Ayoub Khan. By the last advices, the European Army had nine per cent. in hospital, and the native troops eleven. The coming cold weather will, we trust, considerably improve the health of the garrison.

MILITIA MEDICAL DEPARTMENT.—Surgeon-Major William Batley, Royal Sussex Militia, resigns his commission; also is permitted to retain his rank, and to continue to wear his uniform on retirement.

ADMIRALTY.—Staff-Surgeon W. B. Fletcher has been appointed to Devonport Dockyard; Staff-Surgeon J. L. Sweetman to the *Fawn;* Staff-Surgeon C. J. Fennel to the *Téméraire*, when recommissioned; Staff-Surgeon W. P. L. Boyle to the *Dotterel*, when recommissioned; Staff-Surgeon Valentine Duke to the *Champion*, when recommissioned; Surgeon James Porter to the *Orontes;* Surgeon John Tyndall to the Haulbowline Hospital; Surgeon H. M. Ellis to the Royal Marine Artillery Division; Surgeon James Simms to the *Excellent;* Surgeon H. E. F. Cross to the *Téméraire.*

Correspondence.

"Audi alteram partem."

ON MEDICAL EDUCATION.

To the Editor of THE LANCET.

SIR,—The great question of medical education, at all times an urgent one, has been of late pressed forward with more vehemence than ever. And no wonder. For after all that has been said and done, a solution of the difficulty which can be, in any sense, called satisfactory seems as far off now as when many years ago the conjoint scheme was first proposed. I would suggest that our failure hitherto has been due to the fact that we have dealt with the evil in the wrong way. We have from the first been attempting to prescribe for the symptoms without previously ascertaining the cause of the mischief. Witness the lengthened discussions of the subject, and especially what was said in some of the sections at the recent meeting of the British Medical Association at Cambridge. Speak to a teacher of medicine, and he tells you how inadequately the study of medicine is carried on. Speak to a teacher of surgery, and he tells you the study of surgery is strangely neglected. The obstetric physician bewails the indifference shown to the study of obstetric medicine. The psychologist is shocked that so little heed is given to his aide. Then all the teachers of natural science with one voice declare that it is idle to expect of students, in the circumstances in which they are at present placed, anything like a genuine knowledge of anatomy, physiology, or chemistry. What is to be done? Reduce in some degree the amount of knowledge required of some of the subjects, so that more attention may be given to others? But only let some one propose to remove from the curriculum of study any single subject, or to reduce the proportion in which it challenges the attention of the student, and at once an army of champions arises not only with irresistible arguments against obliteration, or even reduction, but with many very forcible ones to show why the study of that particular subject should be extended. There appears to be one point only on which all teachers are agreed; eager criticism, always more or less unfavourable, of examinations and examiners, while examiners, in their turn, deplore the shortcoming of teachers and the way in which they waste the time of the student. The student, himself the victim, of course, heartily agrees with the criticism on both sides. Now, what does all this mean? Surely there must be something wrong somewhere. I, for one, think there is something wrong everywhere, and that it is this—*want of time.* The student has not time enough for the work which ought to be done. Only think for a few moments of what is required of a student during the period at which it is arranged he shall be at a hospital. Think of the few months allowed for anatomy and physiology, for medicine and surgery. Is it practicable for average human intelligence, or even for extraordinary ability, thus in any way to do justice to the several subjects of study? By degrees the evil has arisen, and so it has come to be endured. Surely, if we were placed at once face to face with the existing order of things, we should think it too absurd for consideration. Let us try to contrast the demand made upon a student at the present day with what it was a quarter or half a century or so since, and compare this with the additional amount of time at a hospital given to him within the same period. Surely, then, one may begin to understand how this supreme difficulty has arisen, and to anticipate, in the present state of affairs, its inevitable increase. Obviously, therefore, the first step forward to take in the way of education is to lengthen the period of the students' work at the hospital. I should say at once that, in my opinion, seven years is not an hour too long. But how impracticable! Why? I suppose chiefly or solely on account of the additional expense. Well, I cannot now, in this letter, enter into this objection further than to declare that it seems to me to have little magnitude in proportion to the evil which exists, and for which I believe it to be the sole remedy. I cannot help setting forth this view, although, of course, I have no expectation of its acceptance, and, failing its adoption, I must say, after some experience in the matter, that rather than consent to the existing state of things I would reduce within far narrower limits the area of studies, insisting, however, at the same time, that what was actually required should be thoroughly learnt. For I am convinced that the system of cramming, which now passes current for knowledge, is not only, in chief part, useless in practice for any technical purpose, but that it is positively mischievous, in no slight degree demoralising, to the student. In many it is altogether, and in all it is in some degree, opposed to honest study, to real genuine knowledge, to thoroughness of purpose, and devotion to truth. For it is, in its very nature, essentially false.

I am, Sir, yours, &c.,

Nov. 30th, 1880. WM. S. SAVORY.

ON WATCHING THE PULSE DURING THE ADMINISTRATION OF CHLOROFORM.

To the Editor of THE LANCET.

SIR,—In reading the article on the Administration of Anæsthetics by Dr. Saundby in THE LANCET of Nov. 20th, I was surprised to find that he says with reference to the administration of chloroform, "The pulse may be disregarded, as it gives no timely warning of approaching danger." As this is in direct opposition to my own experience, I shall be glad if you will permit me to give my reasons for saying that the careful watching of the pulse during the inhalation of chloroform is of the utmost importance.

During the present year I have given anæsthetics at

St. Bartholomew's Hospital 1420 times, and of these chloroform 572 times; and in three of these cases I have had reason to be thankful that I carefully watched the pulse during the administration. I believe that had I not done so I should have lost the patients.

Case No. 7673 was a woman, aged forty, under the care of Mr. Power. The operation was iridectomy of the left eye and abscission of the right. The patient took chloroform well until the end of the operation, when the pulse failed suddenly, the respiration continuing. I gave directions for the feet to be raised (Nélaton's method), and I had drawn out the tongue and was ready to commence artificial respiration when the breathing, as I had anticipated, failed also. After three or four thorough compressions of the chest the patient gasped, but did not breathe properly for some minutes, during which time artificial respiration was maintained.

Case No. 8688 was a woman, aged seventy-six, bronchitic and asthmatic. Removal of large tumour of the breast, under the care of Mr. Thos. Smith. During the operation the pulse became weak and irregular, and then stopped, the respiration continuing. I treated her in the same way as the case above. The pulse returned and gradually improved from the time the legs were raised. The operation was completed without interruption. The respiration did not entirely cease.

Case No. 8702 was a man, aged thirty-four. The operation was for the removal of a small tumour from the scalp, and was performed by Mr. Lockwood, house-surgeon. During the operation the pulse became weak and irregular, and then stopped. Knowing what to expect, the same treatment was adopted. Respiration also now stopped, and artificial respiration was immediately performed while the patient was supported by the legs. A minute and a half elapsed before the respiration returned.

Now, in each of these cases I maintain that the pulse gave timely warning of approaching danger. No looker-on, how carefully soever he may have watched the respiration, would have suspected what was about to happen before I had given directions for the patient's legs to be raised, and had in my hand a pair of dressing-forceps ready to draw out the tongue.

It may be argued that to have three cases of the kind quoted in 600 administrations is a very unusual occurrence. And with this I entirely agree. Out of the total number of cases (nearly 9000) in which I have administered anæsthetics of one sort or another, I do not think more than half a dozen cases of this kind have occurred. To have three cases, therefore, in a year, represents merely the curious manner in which exceptional cases occur together; the last two happened within a few days of each other. It may be said, too, that in point of time a few seconds only were gained in each of these cases. But if by watching the pulse a few seconds can be gained in the application of restorative means to one case in *ten thousand*, it is in my mind a sufficient reason for most carefully watching the pulse in each and every case.

I am, Sir, yours obediently,

JOSEPH MILLS,
Administrator of Anæsthetics to St. Bartholomew's Hospital.

Nov. 27th, 1880.

M. PASTEUR'S EXPERIMENTS WITH CHICKEN-CHOLERA.

To the Editor of THE LANCET.

SIR,—The researches of M. Pasteur, published in your columns on Nov. 6th, must claim the careful consideration of all who are interested in the present state of preventive medicine and sanitary science—and who are not? Prof. Huxley had expressed an opinion that these experiments would be the means of placing vaccination upon a scientific basis, but this opinion does not seem to be justified.

M. Pasteur's chief points are—that chicken-cholera is a virulent disease, rarely recurrent, due to a microscopic parasite, capable of cultivation, and also of *attenuation* outside the body; the attenuated virus, when retro-inoculated, producing a mild disease, and securing from subsequent attack. A reference to vaccination in the paper suggests an analogy between it and the attenuated virus, but M. Pasteur is too scientific a man to insist this relation. "The difference is great," he says, "in some respects between the two classes of facts, and it may be well to remark that as regards our knowledge and our deductions the advantage is with the study of fowl's cholera; the relations between variola and vaccine are still a matter of controversy." The experiences of the Lyons commission, conducted by M. Chauveau, were, no doubt, in M. Pasteur's mind when he hesitated to draw an analogy between small-pox and vaccinia and chicken-cholera and its attenuated derivative; this commission and its admirable report, entitled "Vaccine et Variole, nouvelle étude expérimentale sur la question de l'identité de ces deux affections," have been too much ignored, at least in this country. After careful and patient investigation the commissioners reported that, "Notwithstanding the apparent resemblances which, both in animals and man, exist between variola and vaccinia, these two diseases are none the less perfectly independent, and cannot be transformed the one into the other." As Dr. Cameron has tersely put it, "You can no more make small-pox into cow-pock than by stunting an oak tree you can make it a gooseberry bush."

But to return to M. Pasteur's paper, and to the most important question raised in it, By what means is the cholera virus attenuated and destroyed? The answer is clear, logical, and conclusive: "It is the oxygen of the air which weakens or extinguishes the virulence." Tubes of virus hermetically sealed retained their virulence for months; tubes of virus exposed to pure air gradually and progressively, with almost mathematical precision, lost their virulence, and became innocuous. The microscopic parasite was dead! Here was the presence of the cause (the oxygen) followed by the presence of the effect (the death of the parasite, and extinction of the virulence of the poison), the absence of the cause followed by the absence of the effect; and the greater the amount of the cause the greater was the effect. What more logical? M. Pasteur wisely asks, "May we not here be in the possession of a principle? It may be hoped the inherent action of atmospheric oxygen, a natural force which is everywhere present, will be found efficacious in other virus. May we not presume henceforth that it is to this influence we may attribute the limitation of great epidemics?" Without accepting unreservedly this plausible hypothesis, it is curious to see how readily it offers an explanation of many scattered facts with which we have become acquainted—e.g., the efficacy of isolation and the limitability of infection, the utility of oxidising disinfectants, the salubrity of the country and the morbidity of the town, the success of the cool or open-air treatment of certain diseases, the decline of zymotic disease before the progress of sanitation, and many others. The theory harmonises these facts, and supplies a reason for what was before empirical only, though none the less true.

M. Pasteur's conclusions receive additional support from experiments made by Professor Thiersch and Dr. Burdon Sanderson on mice with the poison of human cholera. It was found that the poison intensified up to the third day, and then attenuated under exposure to air or cold.

What, then, are the inferences to be drawn from these facts? Do they warrant the inoculation of all persons with the attenuated viruses of all zymotic diseases with a view to prophylaxis? Do they not rather establish a stronger plea for extended sanitation, for the means of fighting diseases outside our bodies and not within them, for making our hygiene so good that prophylactics and antiseptics shall be superfluous?

I am, Sir, yours faithfully,

W. J. COLLINS, B.Sc., M.R.C.S.

St. Bartholomew's Hospital, Nov. 16th, 1880.

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—I beg leave to inform your readers, if you will kindly print this, that a committee is formed in Southwark for the reform of the government of Guy's Hospital. The first step will be to increase the committee, and then immediately to hold a public meeting at the Bridge House Hotel. Mr. Alexander Hawkins, jun., member of the School Board, is the honorary secretary. I hope members of our profession, favourable to this movement, will send their names for this committee, directed to Mr. Hawkins, Vestry Hall, Borough-road, Southwark.

I am, Sir, your obedient servant,

W. RENDLE, F.R.C.S.

IRELAND.

(From our own Correspondent.)

THE name of Dr. Lyons, M.P. for Dublin, has been mentioned as a probable successor to the late Dr. Alfred Hudson on the General Medical Council.

The entries of students at the various medical schools in Dublin ceased on Nov. 22nd, and from the returns received from those institutions, I learn that for the present session a total of 848 students have been enrolled. Of the five medical schools the Ledwich, as usual, has the highest number—viz., 230; followed by Trinity College, 192; next the College of Surgeons, 183; then the Carmichael, 149; and lastly the Catholic University, with 94. All these institutions exhibit an increase over the session 1879–80—a fact which may be partly attributed to the fifty-eight students who were attached to Steevens's Hospital Medical School last year having been dispersed, owing to the closing of that school of medicine.

The first meeting of the forty-third annual session of the Dublin Obstetrical Society for the present year was held in the College of Physicians on the 27th ult. Sir Edward Barrowes Sinclair, the outgoing President, delivered a short address, thanking the members for the honour they had conferred upon him in electing him their president, the duties appertaining to which he had endeavoured to discharge to the best of his ability. He congratulated those present upon the progress the Society was making in Dublin, and mentioned the fact that the Presidents of both the College of Surgeons and the College of Physicians were members of that Society. Allusion was then made to the honour Her Majesty had conferred upon him—the honour of knighthood—a distinction which he greatly prized as coming direct from the Sovereign herself. It was an honour conferred upon him because of the efforts he had made in having trained upwards of four hundred skilled nurses at Sir Patrick Dun's Hospital as midwives for the wives of soldiers; and he was happy to say one of those trained nurses would at present be found at almost every station of the British army, whether at home or abroad. Sir Edward concluded by referring to the lamented death of Dr. Alfred Hudson. Dr. McClintock, President of the College of Surgeons, moved the thanks of the Society to the outgoing president, on whom a high distinction had recently been conferred—bestowed on only two previous occasions, as far as he was able to ascertain, on men eminent in obstetric science. Dr. George Johnston, President of the College of Physicians, seconded the motion, which was cordially adopted.

The Board of Management of the Belfast Royal Hospital, in their recent report for the year ending 31st of last August, regret that they had to apply to the Corporation for authority to expend a large proportion of the donations and bequests to meet the current expenditure of the institution, and clear off the old outstanding debts. To carry on the hospital, however, in full efficiency they had no other course open to them, the fixed annual income of the charity not being sufficient for the requirements of the institution as at present worked, and recourse was had to capital sums, or the usefulness of the charity must have been materially reduced. During the year 1609 persons were treated in the wards and 14,867 patients attended to at the extern department.

Dr. Mapother, President of the Statistical and Social Inquiry Society of Ireland, delivered the inaugural address last Tuesday.

Dr. Faussett, late medical officer of Clontarf dispensary district, has been granted a retiring allowance of £106 6s. 3d. per annum by the Guardians of the North Dublin Union, the Board having rescinded their former grant of £50 yearly. This tardy recognition of Dr. Faussett's services has come too late, as that gentleman died last Monday, the 29th ult.

The returns for the September quarter show a decrease in the population of Dublin of 11,375, caused by emigration. The poor-law returns furnished by the Local Government Board exhibit a considerable increase in the number of persons receiving relief, as compared with the corresponding quarter of 1879.

Dublin, Nov. 30th, 1880.

PARIS.

(From our own Correspondent.)

A SOCIETY has recently been founded in Paris for the propagation of cremation, which is at present illegal in France, and the names of a number of medical authorities and municipal councillors figure amongst the general committee. The object of the society is twofold. First, to agitate for legislative measures in favour of cremation; secondly, to encourage scientific research as to the best means of putting it into practice. All those who are in favour of cremation, and who will engage to exert themselves actively in the furtherance of the cause, are invited to join, the number of members being unlimited, and as the annual subscription is small a great many adhesions may be expected. When the first object is attained, and cremation has become legal, the society will change its name to that of Société Française de Crémation, and will devote itself peaceably to the construction of *crematoria* and *cineraria*, and to the gratuitous incineration of defunct members.

The *Progrès Médical* contains an article by Dr. Landouzy on a means of arresting the cough of phthisical patients, at any rate for a sufficient length of time to enable the hospital physician to perform auscultation. This is the hypodermic injection of distilled water, or, better still, a weak solution of cherry-laurel water. In order that the knowledge of the remedy used shall not be a bar to its efficacy, Dr. Laudouzy prescribes it under the name of binoxide of hydrogen. The injection should be made as near the pulmonary lesion as possible.

At the Academy of Medicine the greater part of the last three sittings has been occupied by Dr. Maurice Raynaud, who communicated his researches on the treatment of cerebral rheumatism by cold baths. The method seems to have been as successful in France as it has been in England.

PYRMONT AND OEYNHAUSEN.

(From our Roving Correspondent.)

(Concluded from p. 833.)

NOT much space need be devoted to a description of Oeynhausen. The natural beauties of the locality cannot in any way compete with those of hundreds of other health resorts, and its main attraction is its mineral water. I shall therefore give only a few words to the locality, and shall discuss the merits of the water at some length. Oeynhausen is a small town in close connexion with the neighbouring village of Rehme, and the words Rehme and Oeynhausen, either separately or in combination, are used almost indifferently to denote the locality. It has a station on the direct line from Cologne to Hanover, and is 154 miles from the former and fifty miles from the latter city. In the village of Rehme are large salt-works belonging to the Prussian Government, which date from about the year 1750. In the year 1830 it was thought advisable to increase the quantity of salt water available for the salt-works by sinking an artesian well, and the necessary operations were completed after sixteen years of labour by an engineer named Oeynhausen, who sunk his shafts to a depth of 2200 feet, and ultimately obtained a continuous flow of salt water, amounting to sixty cubic feet in the minute. The water was first used for bathing purposes by the workpeople engaged in the boring operations and by the peasantry of the district, and the first bath erected was in 1839–40. In 1848 the commencement of the present bathing establishment was made, and it was named after the distinguished engineer (Oeynhausen) who conducted the works. At present there are two large bathing establishments and a vapour bath, and the annual number of guests amounts to between three and four thousand. The bathing establishment is surrounded by a large park, laid out upon the sandy soil, and the usual amusements (music, reading-room, concert-room, &c.) are provided for the visitors. The neighbourhood is pretty enough, but not likely to attract mere pleasure-seekers. The huge walls of faggots constructed for the purposes of the salt works and over which salt-water is

continually trickling, are said to ozonise the air in proximity with them and to fill it with saline particles, and certain classes of invalids are recommended to haunt the neighbourhood of these moist faggot-piles for the purpose of inhaling the so-called *Gradier-luft*.

Without its salt-water Oeynhausen could have no claim to be considered as a health-resort, and I will, therefore, refer somewhat fully to this water and its effects. The water contains about 4½ per cent. of solids, of which 3½ per cent. are chlorides (chiefly sodium chloride). It has a specific gravity of 1030, a natural temperature of about 90° F., and each litre contains about 750 cubic centimetres of free carbonic acid. Warmth, salt, and free carbonic acid are, therefore, the three factors which may be credited with special therapeutic effects.

Julius Braun, the author of the well-known work on Baths and Mineral Waters, was physician at Oeynhausen for many years, and his explanation of the effect of salt (or Sool) baths may be accepted. There is no evidence that either the salt or the carbonic acid undergoes any absorption, and the effect of the bath is entirely due to the irritation by the water of the terminations of the cutaneous nerves. Braun asserts that the effect produced by a strong salt bath at a temperature of 95° F. is equal, both as regards objective phenomena and subjective symptoms, to a *pure water* bath at 100° F. The water of Oeynhausen has a *natural temperature fit for bathing*, and thus having neither to be cooled nor heated before use the contained carbonic acid is not suffered to escape during a long exposure or expelled by artificial heat. The water comes frothing into the bath tub, and there suffers its first loss of gas. On being placed in one of these natural baths the patient experiences a slight sense of chill, but this in the course of a minute or so gives way to a strong reaction, as evidenced by a feeling of warmth and comfort and a glowing skin. The temperature of the body sinks during the bath, but the patient nevertheless experiences (it is said) the comfort and quiet of a warm bath. It is essential that the bath be not too hot, or else the stimulation becomes too violent. It is necessary also that the water be not agitated, so that the escape of carbonic acid be not hastened, and the pernicious effects of its inhalation by the patient be engendered. The effect of such a bath is to strongly stimulate the skin, and through it the central nervous system; blood movement is increased, tissue change is hastened, and the whole system is roused to an unusual state of activity. These baths are said to be of particular service to weakly convalescents unable to undergo the fatigue of sea-bathing, or to take active exercise, in order to produce reaction. By the triple irritation of warmth, salt, and carbonic acid, reaction is produced with a maximum facility. In cases of gout and rheumatism, where the joint affection has not become too chronic, and in cases of muscular rheumatism, Oeynhausen has some reputation, but it is for scrofula in all its manifestations that these baths are most employed. "Skin culture" is much insisted on in Germany as a means of treating scrofula, and the baths of Oeynhausen are naturally popular as skin stimulants. All forms of paraplegia are said to derive benefit here, especially cases of acute spinal myelitis, which are quickened in their recovery by a judicious use of the baths. "After the termination of the acute stage," says Braun, "which is marked by fever and violent eccentric pains, paraplegia develops itself *without paralysis of the sphincters, and without anæsthesia;* and this is the point at which the antiphlogistic treatment hitherto indicated must give way to that of baths." In other words, the cases must be *in a fair way to recover* in order that the magical effect of Oeynhausen shall be produced. Having seen the baths of Oeynhausen, and having read what Braun, its chief apostle, has to say upon the subject, the Englishman will ask himself seriously whether it can be worth while to send patients from England to Oeynhausen.

The results obtained by sending scrofulous subjects to Margate and other bathing-places on the east coast are so splendid, often bordering on the miraculous, that we are not likely to grow dissatisfied with them, or to imagine that Oeynhausen can effect what Margate cannot. It must be better to bathe in the sea than in a room more or less filled with carbonic acid, and it must be that the carbonic acid escaping from the Oeynhausen water is inhaled by the bather. Skin-culture is certainly much better understood in England than in Germany, and when our Teutonic brethren have studied our habits a little more attentively, they will perhaps, learn that a rough towel is, as a skin-cultivator much better than carbonic acid, and has the great advantage of producing no deleterious effect. Bathing quickens and stimulates nutrition, and it is essential that baths of all kinds should be taken in the purest air possible.

As regards the relief of paralytic troubles, I may remark that, "There is a tide in the affairs of paraplegia, which, taken at the flood, leads on to fortune." In cases of spinal hæmorrhage, and in cases of localised meningitis, especially if the subjects be young, there comes a time when, after a prolonged rest in bed, the pathologic conditions reach that minimum stage which we call a cure, and the spinal cord is ready to resume its functions and rouse from the dormant state engendered by the injury and the enforced rest. Then is the time to stimulate the skin (which in such cases always becomes dry and harsh), and there is nothing better than baths and friction. Such favourable results have been obtained in these cases by simple warm water and rough towels that it would be difficult to believe that Oeynhausen could accomplish more than can be attained by ordinary simple methods.

With regard to the effect of warm bathing and "skin culture" on gout and rheumatism there can be no doubt, but in connexion with this subject it may be well to recite a case which has come very closely under the writer's observation. A single lady, aged thirty-six, in the summer of 1876 was suffering from "gout." There was nodular enlargement of the finger-joints and of the toes, and some of the bigger joints were also affected. A similar condition existed to a marked extent in a maternal uncle and aunt. The patient was somewhat pale, and slightly inclined to be stout. Her habits were most abstemious, and at the time when she first came under observation she was very weak, and quite unable to walk except very slowly. In the summer of 1876 she was sent to Spa, where she took constant warm baths, and from there went to Homburg, where she continued her bathing. After some three weeks she was no better. The baths were given up, and it was resolved to try what life in the open air would accomplish, together with a daily perspiration induced by exercise. A start was made in the middle of August for the Black Forest and Switzerland. The patient rose at six, spent the whole day in the open air, carefully avoided all crowded rooms (such as the salons of hotels at night), took as much exercise as she could accomplish (which at first was very little), and went to bed at nine. The result was wonderful. At the end of three weeks she was able to walk from Airolo to Andermatt, over the St. Gothard, and returned to England in robust health. She continued well till the present summer, when the symptoms took a fresh start, and the fingers, toes, elbows, and ankles were attacked. The treatment so successful in 1876 was repeated, and a walking tour in North Germany was undertaken (not, be it observed, in a high mountain district, as was the case in 1876); and, notwithstanding the implication of one ankle, she was encouraged to use it as much as possible. The best results followed, and in a little time she had no difficulty in walking ten miles a day, sleeping well, eating well, and able thoroughly to enjoy existence.

Before giving credit to the effects of baths and mineral waters, one must be acquainted with the results obtainable by a natural and a simple mode of life. If patients would go to some healthy locality and make it a rule to spend at least fourteen or fifteen hours in the open air, to take all the exercise possible, and enjoy the daily luxury of a good vulgar "sweat," followed by a rapid sponging and a dry rub, avoid crowded rooms, eat simple food, and practise the rule of "early to bed and early to rise," I believe that a wearisome sojourn in some foreign Bethesda might often be avoided.

Obituary.

SURGEON-MAJOR BRYDEN,
BENGAL ARMY.

OUR columns last week announced the death of another distinguished member of the Indian Medical Service. Dr. James Lumsdaine Bryden died at Upper Norwood on the 18th ult. at the early age of forty-seven, leaving a widow and three young children to mourn his loss. Dr. Bryden was educated at the High School, Edinburgh, receiving his

medical education also in the university of that city, obtaining his M.D. degree in 1855. He entered the Bengal Medical Service in 1856, and served through the Indian Mutiny, being present at the siege of Delhi and relief of Lucknow—medal and two clasps. He was for four years civil surgeon of Buxar, and was then transferred to Calcutta for statistical duty, shortly afterwards being appointed "statistical officer to the Sanitary Commissioner with the Government of India," which office he held till compelled by failing health to leave India in August last. For more than ten years Dr. Bryden worked uninterruptedly at the important subject of the statistics of the European and native armies of India and of the gaol population; the voluminous and able Blue Books published by Government under his authority are too well known to require further reference in these columns. They are the result of unceasing labour and patient research on a subject hitherto entirely neglected. The time and thought bestowed on their compilation were immense, and proved even too much for a frame endowed by nature with robust strength and physique. Bryden broke down under the strain of incessant work, the value of which had been barely, if at all, recognised by the Government, whose faithful and able servant he was. He died in harness.

One who knew him well and intimately writes: "Sensitive, modest, and retiring, to a degree seldom met with but in men of the finest and most highly-strung moral fibre, Bryden's life was one long self-sacrificing consecration to duty. Had he been endowed with a larger share of noisy and obtrusive self-assertion his talents might have advanced him to a much more prominent position than that accorded to him by the Government of India under the long-sounding but subordinate title of 'Statistical Officer to the Sanitary Commissioner with the Government of India.'" There is only too much reason for the suspicion that the absence of appreciation of his long and valuable services on the part of the Government of India, or at least the delay in the expression of any such appreciation, until over and beyond the time at which such an acknowledgment would have been gratifying and inspiriting to him, contributed to increase the mental depression which is such a frequent accompaniment of the insidious disease under which he laboured, for a longer period than he or his friends were aware of—viz., Bright's disease. With all Bryden's philosophic knowledge of the subjects which had become the study of his life, was added an intense power of concentration and that painstaking accuracy as to details which is such a frequent as to be an almost essential attribute of genius—this depth of insight and breadth of view concerning the vast problems involved in the consideration of the vital statistics of our Indian Empire, entitling him to rank among the most advanced of medical philosophers and thinkers,—was combined with a disposition so gentle, simple-minded, and childish, as to endear him to all who came under its winning influence. Within the sacred precincts and associations of the home circle his affectionate and loving nature exhibited its fullest development and enjoyed its most prized rewards. He was truly, and without exaggeration, one of those "pure in heart who shall see God," and although dead he still speaketh to all sincere workers by the example of his gentle and devoted life, for his works live after him.

He was interred at the Norwood Cemetery on November 22nd, being followed to his grave by his only son, a boy of eight years, a few relations, intimate friends and brother officers; among the latter were General Harrington, of the India Office, and Brigade Surgeon L. Kidd, of the Army Medical Department.

DR. WILLIAM LAUDER LINDSAY.

WE regret to record the death of this much-esteemed physician, which took place at 3, Hartington-gardens, Edinburgh, on the 24th ult., at the age of fifty. Wm. Lauder Lindsay, M.D., F.R.S.E., and F.L.S., was a talented and apt scholar at the Royal High School in 1845–6, where he carried off six medals and other honours. He was appointed medical officer to Murray's Royal Institution for the Insane at Perth in 1854, which appointment he held for a quarter of a century. He took his degree in medicine at the University of Edinburgh in 1852, when he distinguished himself as a student of no ordinary type, having obtained many honours. He was also a thesis medallist. Lindsay was a keen botanist, having collected a valuable and rare herbarium, lichens having been his favourite study. Geological research was only second to that of botany. He held medals from Edinburgh University for botanical dissections, 1848 and 1849. Among the honours Dr. Lindsay obtained after his graduation, we may mention First Neill prize of the Royal Society, 1859; Gold Medal from the London International Exhibition of Fine Arts; Medal from New Zealand Exhibition, 1865, and Medal from the Royal Society for eminence in Natural History. His popular "Memoirs on the Spermogones and Pycnides of Lichens" was his first published work in 1870, which was followed by "The Superannuation of Officers in British Hospitals" in 1875, and his last and best effort was published in 1879—namely, "Mind in the Lower Animals in Health and Disease" (2 vols., Kegan Paul and Co.). Lindsay's pen was seldom idle, as we find a long series of articles on "Cholera," "Glycerine," "Insanity," "Toxicology," "Therapeutics," and "Hygiene," published in the medical journals. He was ever fond of books; in fact, almost a bookworm, even spending his pocket-money when at the High School in purchasing standard works; he was especially fond of Scott and other celebrated authors. In consequence of enfeebled health he relinquished or resigned his duties at Perth in November, 1879. He suffered from severe dyspepsia, and could eat little food. Various remedies were tried, and several changes of climate were advised, but to no purpose. His health gradually declined during this year, and he died from absolute exhaustion of mind and body. In private Dr. Lindsay was most unobtrusive and retiring, and usually shunned the company even of his oldest friends. He shrank from ostentation, marked even in his death, having left orders that his body was either to be cremated or buried in a plain deal coffin. At all times unwilling to trouble any one, he was nevertheless deeply sensitive to the kindness of his medical brethren. Dr. Lindsay had been a widower for seventeen years, and has left one daughter. His only brother is Dr. Murray Lindsay, physician to the Derby County Asylum. We may only add that Dr. Lindsay was very reticent in regard to his religious views; he was a member of the Free Church of Scotland.

Medical News.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent M.D. Examination:—

Buchanan, Arthur, Guy's Hospital.
Cattle, Charles Henry, Leeds and University College
Chapman, Paul Morgan, University College.
Colquhoun, Daniel, Charing-cross Hospital.
Dunbar, James John Macwhirter, St. George's Hospital.
Ferrier, John Christian, Guy's Hospital.
Gristock, William, Univ. College and Westminster Hospital.
Henderson, G. Courtenay (Gold Medal), University College.
Jones, Arthur Henry, Guy's Hospital.
Lubbock, Montagu, Guy's Hospital.
Mackern, George, Guy's Hospital.
Phillips, Sidney Philip, Univ. College and Middlesex Hospital.
Sainsbury, Harrington, University College.
Silcock, Arthur Quarry, B.S., University College.
White, William Hale, Guy's Hospital.
Wiglesworth, Jos., Liverpool Royal Infirmary and St. Thomas's Hospital.
Wilkinson, Arthur Thomas, B.A., B.Sc., Owens College.
Willcocks, Frederick, King's College.

LOGIC AND PSYCHOLOGY ONLY.

Bond, James William, B.S., University College.
London, Alfred Austin, University College and Middlesex Hospital.
Plumbe, Samuel Thomson, St. Bartholomew's Hospital.
Prowse, Arthur Bancks, St. Mary's Hospital.
Ryley, James, University College.
Williams, Dawson, B.S., University College.

The following gentlemen have passed the Second M.B. Examination (Honours):—

MEDICINE.

FIRST CLASS.

Newsholme, Arthur (Scholarship and Gold Medal), St. Thomas's Hospital.
Money, Angel (Gold Medal), University College.
Saunders, Arthur Rich, University College.
Barnes, George Frederick, St. Bartholomew's Hospital.
Sellers, William, University of Edinburgh and London Hospital.
Meek, John William, Guy's Hospital.
Pollard, Bilton, University College.
Paddle, James Isaac, B.A., B.Sc., University College.
Suckling, Cornelius William, Queen's College, Birmingham.

SECOND CLASS.

{ Brooke, H. Ambrose Grundy, B.A., Owens Coll. and Guy's Hosp.
{ Harvey, Alfred, Queen's College, Birmingham.
Shaw, John, St. Thomas's Hospital.
Wainewright, Robert Spencer, Guy's Hospital.
Baddeley, Charles Edward, King's College.
{ Dalton, Norman, King's College.
{ Penny, Edward, Guy's Hospital.

THIRD CLASS.

{ Day, Donald Douglas, St. Bartholomew's Hospital.
{ Sayer, Mark Feetham, University College.
Notley, William John, B.A., University of Edinburgh.

OBSTETRIC MEDICINE.

FIRST CLASS.

Barnes, G. F. (Scholarship and Gold Medal), St. Bartholomew's Hospital.
Paddle, James Isaac (Gold Medal), University College.
Banks, William, University College.
Saunders, Arthur Rich, University College.
Newsholme, Arthur, St. Thomas's Hospital.

SECOND CLASS.

Pollard, Bilton, University College.
Sayer, Mark Feetham, University College.
Rich, Arthur Creswell, St. Thomas's Hospital.
Permewan, Arthur Edward, University College.

THIRD CLASS.

Sellers, William, University of Edinburgh and London Hospital.
Dalton, Norman, King's College.
Harvey, Alfred, Queen's College, Birmingham.
Meek, John William, Guy's Hospital.
Day, Donald Douglas, St. Bartholomew's Hospital.

FORENSIC MEDICINE.

FIRST CLASS.

Meek, John Wm. (Scholarship and Gold Medal), Guy's Hospital.
*Paddle, James Isaac (Gold Medal), University College.
†Banks, William, University College.
†Shaw, John, St. Thomas's Hospital.
Rich, Arthur Creswell, St. Thomas's Hospital
Money, Angel, University College.
Berry, Frederic Haycraft, Guy's Hospital.

SECOND CLASS.

Newsholme, Arthur, St. Thomas's Hospital.
Penny, Edward, Guy's Hospital.
Pollard, Bilton, University College.
Wainewright, Robert Spencer, Guy's Hospital.
Saunders, Arthur Rich, University College.

THIRD CLASS.

Faulkner, John Thomas, Owens College.

* Obtained number of marks qualifying for University Scholarship.
† Obtained number of marks qualifying for Gold Medal.

The following gentleman passed the M.S. Examination :—

Symonds, Charters James, M.D., Guy's Hospital

The following gentlemen passed the B.S. Examination :—

FIRST DIVISION.

Claremont, Claude Clarke, University College.
Gill, Richard, B.Sc., St. Bartholomew's Hospital.
Neale, William Henry, University College.
Pollard, Bilton, University College.
Sheppard, Charles Edward, St. Thomas's Hospital.
Smith, Robert Percy, St. Thomas's Hospital.

SECOND DIVISION.

Day, Donald Douglas, St. Bartholomew's Hospital.
Money, Angel, University College.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Nov. 18th :—

Pratt, Reginald, Billesden, Leicester.

The following gentlemen passed on Nov. 25th :—

Beresford, Chas. William, Royal Infirmary, Isle of Wight.
Daly, Edwin Owen, Coleshill-street, Eaton-square.
Flood, Francis Fulteney, Guy's Hospital.
Mortimer, J. Desmond Ernest, Westminster Hospital.
Oulton, Hy. William, Balleckmoyler, Queen's County.
Robinson, Charles William, North Shields.
Shelley, Robert Williamson, Sunderland.
Willey, Charles Henry, Leicester.

The following gentlemen also on the same days passed their Primary Professional Examination :—

Anthony John Bathe and Chas. Nathaniel Simons, St. Bartholomew's Hospital; Joao Francisco Braga, King's College; Albert Bleckly Clarke, Charing-cross Hospital.

THE Board of Guardians of the Thetford Union have added nine guineas per annum to Mr. J. R. Clouting's salary, in consideration of the long distance (over nine miles) he has to drive, through an unpopulated piece of country, to one of the parishes in his district. The original proportion of salary allotted for that particular parish was eighteen shillings per annum.

LAST week a deputation from the Lancashire and Cheshire Association for the Prevention of Noxious Vapours had an interview with the President of the Local Government Board, to urge the Government to deal with the subject of noxious vapours next session. The interview was private.

DUBLIN OBSTETRICAL SOCIETY.—The following office-bearers have been appointed for the ensuing year :—President : John A. Byrne. Vice-Presidents : Robert Dill, Arthur V. Macan. Committee : George Hugh Kidd, John R. Kirkpatrick, Alfred H. McClintock. Treasurer : John Joseph Cranny. Secretary : Wm. Roe.

VACCINATION GRANTS.—The following gentlemen have received the Government grant for successful vaccination in their districts :—Mr. Charles Lyddon, L.R.C.P., M.R.C.S. Eng., L.S.A. Lond., Oldbury, West Bromich Union, £25 10*s.* Mr. A. H. Boys, of Pill, near Bristol, £7 8*s.* (second time).

THE Duke of Edinburgh is expected to assist as one of the executants at a concert to be given on the 18th inst., at the Royal Albert Hall, by the Amateur Orchestral Society, in behalf of the funds of the French Hospital. The Prince of Wales, also, it is stated, will be present.

THE contributions by the Locomotive Department of the North-Eastern Railway, Greensfield, Gateshead, to the Newcastle Hospital Saturday Fund have this year amounted to £55, as compared with £47 4*s.* 3*d.* last year, showing an increase of £7 15*s.* 9*d.*

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ALEXANDER, L., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer of the Good Hope District of Trelawny, Jamaica.

BANES, W., M.B., has been appointed Assistant Medical Officer to the Friends' Retreat, York, vice Campbell, resigned.

BARR, J., M.B. & C.M., has been appointed Certifying Factory Surgeon for the Clayton-le-Moors, Great Harwood, and Rishton Districts.

BARTON, E. W., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of Health for the Market Rasen Urban Sanitary District. £10 10*s.* for one year.

COOKE, Mr. E., has been appointed House-Physician to the Royal Infirmary, Glasgow.

CROSSLEY, C., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Surgeon to the Leicester Provident Dispensary.

DONALD, Mr. J., has been appointed House-Physician to the Royal Infirmary, Glasgow.

FORT, T., L.R.C.P., M.R.C.S.E., has been appointed a Certifying Factory Surgeon, vice Halkyard, F.R.C.S., resigned.

GRAY, T., M.B., L.R.C.S.Ed., has been appointed Clinical Assistant to the Ophthalmic Wards of the Royal Infirmary of Edinburgh, vice Woodhead, resigned.

GUEST, Mr. A. H., has been appointed House-Physician to the Royal Infirmary, Glasgow.

HORMAZDJI, R. N., M.R.C.S.E., L.R.C.P.Ed., L.S.A.L., has been appointed Resident Surgeon and Honorary Secretary to the Cheltenham General Hospital Branch Dispensary, vice J. G. Boughton, resigned.

HUNTER, Mr. C. B., has been appointed House-Physician to the Royal Infirmary, Glasgow.

JOHNSTON, Mr. J., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

JONES, E. S., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Abererch District of the Pwllheli Union, vice Hughes, resigned.

KNOX, J. H., M.B., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Clapham District of the Settle Union, vice Deighton, deceased.

MCKAY, H., M.B., C.M., has been appointed House-Physician to the Royal Infirmary, Glasgow.

MCLENNAN, Q., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

MATTHEWS, V., M.R.C.S.E., L.S.A.L., has been appointed Sambrooke Medical Registrar to King's College Hospital.

MUIR, J. F., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

NEISH, J., M.D., has been appointed Health Officer at Port Royal, Jamaica, vice Altman, who retires.

PALMER, C. DE M., M.B., M.R.C.S.E., has been appointed Medical Officer for the Halford District of the Shipston-on-Stour Union.

PICKWORTH, A. J., L.R.C.P.Ed., L.F.P.S.G., L.M., has been appointed Medical Officer to the Nenthead Lead Miners' Union, at a salary of £120 per annum. Also Medical Officer to the Nenthead District of the London Lead Company's Men, at £55 per annum, house-rent free, and private practice.

PREES, W. M., L.R.C.P.Ed., M.R.C.S.E., has been appointed Assistant Medical Officer at the Mill-road Workhouse of the West Derby Union, vice Boucher, resigned.

SHETTLE, H. W., M.R.C.S.E., L.R.C.P.Ed., has been appointed House-Surgeon to the Royal South Hants Infirmary, Southampton.

SPOLTON, G., L.R.C.S.I., has been appointed Medical Officer for the Newtowngore Dispensary District of the Bawnboy Union, vice Kenny, resigned.

STEDMAN, A., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Effingham District of the Dorking Union.

STEELE, W. C., L.R.C.P.Ed., M.R.C.S.E., has been appointed Assistant Medical Officer and Dispenser at the Infirmary, St. Saviour's, Southwark.

WAGSTAFF, E. H., M.R.C.S.E., has been appointed House-Surgeon to the Hull General Infirmary.

WATSON, Mr. J. M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

YOUNG, W., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

Births, Marriages, and Deaths.

BIRTHS.

BAIN.—On the 22nd ult., at Bournemouth, Hants, the wife of Benjamin Bain, L.R.C.P.Ed., L.R.C.S.Ed., of a son, who survived his birth two days.

PEACEY.—On the 20th ult., at Lewisham High-road, S.E., the wife of William Peacey, M.B., of a son.

SKERRITT.—On the 30th ult., at Thornton Villa, Richmond Hill, Clifton, the wife of E. Markham Skerritt, M.D., M.R.C.P., of a daughter.

SMITH.—On the 1st inst., at Christ's Hospital, London, the wife of Dr. Alder Smith, of a son.

WHITTINGTON-LOWE.—On the 29th ult., at Llanryth, Hove-drove, West Brighton, the wife of R. Whittington-Lowe, M.D., Staff-Surgeon (Army), of a son.

MARRIAGES.

PHILPOTS—SHARP.—On the 24th ult., at St. Bride's Church, by the Rev. J. Scott Ramsay, M.A. (cousin of the bride), Harris Philpots, M.D., of Tavistock, Devon, to Wilhelmina (Mina), eldest daughter of William Sharp, Banker, of 5, Huskisson-street, Liverpool, formerly of Stafford and Manchester.

SAUNDERS—SOLOMON.—On the 27th October, at Sea Point, Cape Town, Henry William Saunders, M.B. Lond., F.R.C.S.E., of Rondebosch, near Cape Town, second son of James T. Saunders, of Carvalla Lodge, Upper Tooting, to Jeannie, sixth daughter of Henry Solomon, of Sea Point.

TINKER—ISHERWOOD.—On the 18th ult., at St. Paul's Church, Southport, by the Rev. W. Millington, M.A., Frederick Howard Tinker, M.R.C.S.E., L.R.C.P., only son of the late Frederick Tinker, F.R.C.S., of Hyde, Cheshire, to Sarah Ann, youngest daughter of James Isherwood, Esq., of Southport.

WAKLEY—DOERING.—On the 2nd inst., at St. Martin's-in-the-Fields, by the Rev. W. G. Humphry, B.D., Vicar, James G. Wakley, M.D., youngest son of the late Thomas Wakley, M.P., to Clementina Agnes Doering, eldest daughter of the late Major Sutherland G. G. Orr, Madras Cavalry.

DEATHS.

CEELY.—On the 27th ult., at Aylesbury, Robert Ceely, F.R.C.S.E., aged 83. Friends will please accept this intimation.

FAUSSETT.—On the 29th ult., William Faussett, M.B., F.R.C.S.I.

GRANT.—On the 24th ult., at Cleator Moor, Cumberland Garden, Milne Grant, M.R.C.S.E., L.R.C.P.Ed., aged 33.

JACKSON.—On the 3rd ult., at Linden Villa, 68, Laurel Grove, Penge, Surrey, Harriet, widow of Mr. William Jackson, Medical Bookseller and Publisher (late of King-street, Borough, London), in her 87th year.

LINDSAY.—On the 24th ult., at 3, Hartington-gardens, Edinburgh, William Lauder Lindsay, M.D., F.R.S.E., F.L.S.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

ALLEN, W. H., & Co.
Report of the Proceedings of the International Congress on the Education of the Deaf, held at Milan. With an Appendix. pp. 180.

ANN ARBOR PRINTING & PUBLISHING COMPANY.
Handbook of Chemical Physiology and Pathology, with Lectures on Normal and Abnormal Urine. By Dr. V. C. Vaughan. Third Edition, revised and enlarged. pp. 347–32. With Illustrations.

BAILLIÈRE, TINDALL, & COX, London.
Movable Atlas of the Brain. By G. J. Witkowski, M.D. Text translated, with the Author's permission, by Dr. T. Stretch Dowse.
Movable Atlas of the Male Generative Organs. By G. J. Witkowski, M.D. The text translated, with the Author's permission, by Dr. D. Campbell Black.

BRADBURY, AGNEW, & Co.
Echoes from the Counties. pp. 220.

CHURCHILL, J. & A., London.
Surgical Enquiries. By Furneaux Jordan, F.R.C.S. Second Edition. pp. 312. With Illustrations.
Clinical Lectures and Cases, with Commentaries. By Henry Thompson, M.D., F.R.C.P. Lond. pp. 197.
A Manual of Ophthalmoscopy, for the Use of Students. By Dr. Daguenet. Translated by C. S. Jeaffreson, F.R.C.S.E. pp. 240. With Illustrations.
Observations on the Cæsarean Section, Craniotomy, and other Obstetric Operations. By Thomas Radford, M.D. Second Edition. pp. 225. With Diagrams.

GRIFFIN, CHARLES, & Co., London.
The Science and Practice of Medicine. By W. Aitken, M.D. Ed., F.R.S. In 2 vols. Seventh Edition. pp. 1150–1181.

KIMPTON, H., London.
A Practical Treatise on the Diseases of Women. By T. Gaillard Thomas, M.D. Fifth Edition, enlarged and thoroughly revised. pp. 803. With 206 Wood Engravings.

LEWIS, H. K., London.
A Text-book of Practical Medicine, with particular reference to Physiology and Pathological Anatomy. By Dr. Felix von Niemeyer. Translated by Dr. G. H. Humphreys and Dr. C. E. Hackley. Revised Edition. 2 vols.
A Treatise on the Practice of Medicine, for the Use of Students and Practitioners. By R. Bartholow, M.D., LL.D. pp. 848. With Illustrations.
Ringworm, its Diagnosis and Treatment. By Alder Smith, M.B. Lond., F.R.C.S. pp. 81. With Illustrations.

LINDSAY & BLAKISTON.
The Mouth and the Teeth. By Dr. J. W. White, D.D.S. pp. 150.

LOCKWOOD (CROSBY) & Co.
Domestic Plumbing and Water Service. By Wm. White. pp. 30.

LONGMANS, GREEN, & Co., London.
Wish and Will. An Introduction to the Psychology of Desire and Volition. By C. L. Turner, M.A. pp. 356.
Transactions of the Clinical Society of London. Vol. XIII. pp. 290. With Illustrations.

MACLAREN & STEWART, Edin.; SIMPKIN, MARSHALL, & Co., London.
The Structural Anatomy of the Female Pelvic Floor. By Dr. D. B. Hart. pp. 45. With Plates and Woodcuts.

MITTLER, E. S., & SOHN.
Armee- und Volks-Ernährung. Ein Versuch Prof. C. von Voit's Ernährungs theorie für die Praxis zu verwerthen von Dr. C. A. Meinert. In zwei Theilen mit 8 lithographirten farbigen Tafeln.

MURRAY, J., London.
The Power of Movement in Plants. By C. Darwin, LL.D. Assisted by Francis Darwin. pp. 592. With Illustrations.
Peruvian Bark; a Popular Account of the Introduction of Chinchona Cultivation into British India. By Clements R. Markham, C.B., F.R.S. pp. 549. With Map and Illustrations.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.
Historical Sketch of the Progress of Pharmacy of Great Britain. By Jacob Bell and Theophilus Redwood. pp. 415.

SMITH, ELDER, & Co., London.
Atlas of Histology. By Drs. Klein and E. Noble Smith. Part XIII.
A Treatise on the Theory and Practice of Medicine. By J. S. Bristowe, M.D. Third Edition. pp. 1179.

On the Management of Infantile Eczema. By Dr. L. D. Bulkley.—On the Use of Sulphur and its Compounds in Diseases of the Skin. By Dr. L. D. Bulkley.—Dress, its Sanitary Aspect. By Richard Roth. (Churchills.)—The Philosophy of Sleep. By W. K. Bayley.—Dynamics of Racial Diet in British India. By Dr. J. W. Johnston, F.R.S.Ed.—Proceedings of the Medical Society of the County of Kings.—Ward and Lock's Universal Instructor; Parts I. & II.—Victorian Review, October.—Illustrated Catalogue of Surgical Appliances, &c. By James Gillingham.—Virchow's Archiv, Nov.—Surgical Treatment of Naso-Pharyngeal Catarrh. By Dr. Goodwillie, New York.—Monthly Review of Dental Surgery.—Die Homöopathie Hahnemann's und die der Neuzeit. Eine vergleichende Studie von Dr. C. Koeppe. (Herschwald, Berlin.)—A Case of Combined Intra-uterine and Abdominal Twin Pregnancy. By Dr. H. P. C. Wilson. (Wood, New York.)—Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for 1880.—Fraser's Magazine, December.—London Opinion, No. 1. (Dean & Son.)—On Infant Nurseries for the Poor. By Mrs. E. P. Grant.—Médicaments Assimilables Per-iodo-arsenic Diastasés du V. Baud.—Fourth Report of the Medical Superintendent of Yaws Hospital.—Transactions of the American Otological Society.—Friendly Greetings.—Girl's Own Paper, December. (Religious Tract Society.)—The Electric Laryngoscope. By Dr. A. W. Adams.—Operations on the Upper and Lower Extremities. An Address by W. H. Folker, F.R.C.S.E.—Vierteljahresschrift für Dermatologie und Syphilis.—Suggestions as to the Therapeutic Value of Rest in the Treatment of Laryngeal Diseases. By D. B. Robinson.—Sulla Malatta di Diessler od Ernoglobino-Albuminuria Parossistica. Per Dott. G. Silvestrini e A. Conti.—Colburn's New Monthly Magazine.—The Veterinarian, December.—Nephrectomy by Abdominal Section. By A. E. Barker, F.R.C.S. (Adlard.)—The Journal of Anatomy and Physiology, Vol. XIV., Part IV. (Macmillan.)—The Carisbrooke Magazine, December.—The Sunday Magazine, December.—Good Words, December.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

| THE LANCET OFFICE, December 2nd, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Nov. 26	29·72	W.	56	55½	..	57	44	0·05	Overcast
" 27	30·04	W.	46	44	..	55	43	0·08	Bright
" 28	30·47	S.W.	50	47	..	54	40	..	Bright
" 29	30·43	W.	46	44	..	52	43	..	Foggy
" 30	30·47	S.W.	44	42	..	48	40	..	Overcast
Dec. 1	30·20	S.W.	46	45	..	51	41	..	Overcast
" 2	30·25	N.W.	43	41	..	46	39	0·02	Foggy

Medical Diary for the ensuing Week.

Monday, Dec. 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Dowse will exhibit a Patient suffering from Tabes Dorsalis, with anomalous Symptoms. — Dr. Broadbent, "On Pleuritic Effusion."

Tuesday, Dec. 7.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. Discussion on "Rickets," continued by Dr. Norman Moore, Mr. Warrington Haward, Dr. Dickinson, Mr. Parker, Dr. Longhurst, Dr. Baxter, and Mr. Lucas.—Dr. Barlow: Case of so-called "Fœtal Rickets."—Mr. Shattock: Osseous Lesion in the Fœtus.—Dr. F. C. Turner: Anatomical and Microscopical Specimens of Rickety Bones.—Dr. N. Moore: Cancer of Prostate (recent specimen).—The President: Card Specimens.

Wednesday, Dec. 8.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
HUNTERIAN SOCIETY.—7½ P.M. Council Meeting.—8 P.M. Dr. C. Turner, "On a Case of Intussusception."—Mr. Warren Tay, "On a Case of Colotomy performed six years ago for supposed Annular Stricture." Mr. Gilbert: "Notes on Cases in General Practice."
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8 P.M. Living Specimens.—8½ P.M. Dr. Hughlings Jackson, "On the Eye Symptoms in Locomotor Ataxy."—Mr. Higgens, "On Hyposcleral Cyclotomy." Mr. Critchett, "On Peritomy in Partial Pannus."—Dr. A. D. Davidson, (1) "On Detachment of Retina after Albuminuric Retinitis"; (2) "On Congenital Absence of one Eyeball."—Mr. J. E. Adams: "Peculiar Opacities in Vitreous Humour following Injury."—Dr. S. Mackenzie, (1) "On a Case of Scurvy with Retinal Hæmorrhages"; (2) "On a Case of Idiopathic Anæmia with Retinal Hæmorrhages."
ROYAL MICROSCOPICAL SOCIETY. — 8 P.M. Dr. Hudson: "Flosculariæ trifolium" (new specimen).—Mr. C. Stewart: "Some Structural features of Echinometridæ." — Notes on the Movements of Diatoms, the Construction of Object-glasses, Swinging Substages, &c.
SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.—8 P.M. Dr. A. Carpenter, "On London Fogs."

Thursday, Dec. 9.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Dec. 10.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Ordinary Meeting.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Tyson (Folkestone), "On a Case of Pneumonia, with Remarks on the Physical Signs of the Disease."—Dr. Habershon, "On a Case of Aphasia, with Hemiplegia on the Left Side; Tumour on Right Side of Brain at third Frontal Convolution. — Mr. Norton, "On an Operation for the Radical Cure of Web-fingers."—Mr. Davies-Colley, "On a Case of Villous Growth of the Bladder successfully removed by Perineal Section." — Mr. Croft will show a Case of Cured Hydrocephroid. — Mr. Tyson will show a Case of Cross-legged Progression.

Saturday, Dec. 11.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Lectures, original articles, and reports should be written on one side only of the paper.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

"TEMPERAMENTS."

THERE has been a good deal of hair-splitting among medical writers on the subject of temperaments. It is not worth while to revive the controversy, or even to recapitulate the names of classes under which the several "temperaments," as they are called, have been grouped. The truth is that the term "temperament" has been employed to designate very different qualities of the physico-medical organism—namely, general type and constitution, and—somewhat too vaguely perhaps—the temperament or temper in its true sense. The popular significance of this word temper—as applied to steel, for instance—holds good, and is especially suggestive and accurate as employed to describe the habitual state of the animal organism. A sound temper or temperament is a well-balanced and regulated condition of mind and body, wherein a healthy degree of tension, as it were, is maintained by the just equipoise and counter-action of the inherent qualities of which the nature is composed. An irritable temper or excitable temperament is one which is too highly or unevenly strung, and will therefore jar on the smallest provocation. A sullen, stolid, or dull temper, merging into moroseness, indicates a condition in which the tension is low, and certain of the more selfish faculties are not duly equilibrated. Just as in the muscular apparatus, if opposing muscles are not of equal strength or duly energised, the limb will not be in a state to act either quickly or continuously in obedience to the will; so in a temperament exhibiting want of due correlation of the inner forces, the judgment has seldom the whip-hand of conduct, and the active life of relation is almost sure to be defective. Temperament has much to do with health preservation. The sound and good-tempered resist disease, and pass unscathed through many dangers, as the stiff craft bending steadily to the breeze, and well under the control of her helm, may thread a narrow passage among the rocks, or as the horse that bears equably on the rein grasped by a firm hand can be driven safely through a crowded thoroughfare. The variable, uncertain, irritable, and, above all, the sullen of temper, are a misery to themselves and those around them; the troubles of life fret their strength, and the perils that lurk in their path can seldom be certainly and pleasantly avoided. There is no better way to live healthily and happily than to cultivate a temperament wherein the most contradictory qualities and properties of the organism are perfectly counterbalanced and combined.

Mr. W. Dawson.—The question is entirely legal; but on moral grounds our correspondent seems well entitled to a quarter's salary. A friendly settlement should be quite possible.

Dr. W. R. Smith, (Cheltenham.)—Yes.

W. R.—Marshall on the Enlisting and Discharging of Soldiers, last edition.

M. D.—The use of the handbill with the adoption of a system of advertising is a sad exhibition of the want of professional taste and spirit.

Scapula.—As early as possible.

Lupus had better apply to one of the pay hospitals.

SCHOOL-BOARD CERTIFICATES.

To the Editor of THE LANCET.

SIR,—I am glad to see in THE LANCET of Nov. 20th a letter from a provincial house-surgeon on the above subject. As one of four assistants in a large railway practice, I can say that we are continually pestered with parents asking for certificates to say their children are unable to attend school; and not content with that, when the children are convalescent (if they have been suffering from fever of any kind), they again come, requesting certificates to say they are now fit to attend school, and are free from infection!—thus entailing great additional labour and responsibility on us. Surely if the School Board require medical certificates they should pay for them.

Yours faithfully,

Wilts, Nov. 1880. H. B. F.

MEDICAL SERVICES IN SPAIN.

DR. ALVARO MENDEZ, the editor of *El Siglo Medico*, of Madrid, Dr. C. Velasco, of Nice, and Dr. de Pietra Santa, of Paris, have entered a protest against the tendency to look upon Spain as the last of nations with respect to sanitary and medical progress. Dr. Velasco remarks that now more than sixty years have elapsed since the Duc de Sesto, then the alcalde corregidor of Madrid, created the *casas de socorro*, an institution which might be imitated with advantage by many nations to the north of the Pyrenees. In each quarter of Madrid there is by law established a house where four to six beds are always held in readiness to receive any persons suffering from accidents or sudden illness, and whom it would be difficult to transport either to the hospital or to their homes. At each of these depôts there are two or three doctors, according to the importance of the district, two nurses, a clerk, and two stretcher-bearers. Both day and night a medical man remains on duty at this post, and he has with him the necessary surgical instruments, bandages, medicaments, &c. This institution is in vogue in all the large towns of Spain. The medical attendants receive fair remuneration, and are appointed by public competition. These appointments supply practice to young doctors, and enable them to tide over the earlier and more difficult period of their careers. For a village of forty poor families and 130 cottages and houses, the local authorities pay the medical man a yearly salary of £23, and the well-to-do inhabitants contribute £77. This total of £100 a year for a country so poor as Spain compares favourably with the sum our rural authorities give to their medical officers of health. The regular functions performed by the "inspectors of salubrity" and the municipal veterinaries, the organisation of a general service for vaccination for the relief of the poor, and the sanitary supervision of ships, all show that Spain is not far behind the age. Indeed, it must be acknowledged that in one respect she is even ahead of her neighbours. The Spaniards have erected two Orders as special rewards for devotion to the cause of public health. The first is a medal or decoration given to doctors who have distinguished themselves during periods of epidemics, and the other is the Order of Benevolence, given as the reward of acts of civic heroism, abnegation, and charity.

Mr. T. Bell, (Uppingham.)—The paper is marked for insertion.

"A NOTE ON INTENTION IN THE DETERMINATION OF SEX AND OF THE MENTAL AND PHYSICAL INHERITANCE OF CHILDREN."

To the Editor of THE LANCET.

SIR,—Dr. Granville's able paper in your journal of October 23rd has opened up a subject of vast importance to the scientific mind of the profession. His argument on "intention" is a grand one, and, as he says, is not even yet recognised, and suggests that the province must be thoroughly explored. Therefore I wish to ask how sex is determined in the case of hermaphrodites, and in those monstrosities where there is no sex at all? What frustrates intention here? Again, for six or seven generations in some families male children only appear; the same in others for girls. Are the "constituent elements" of the "nature" so powerful as to pass through so many generations, no matter how ardent the male or female may be? And where is the "mean" of the two sets of qualities of both parents? Does the "direct" inheritance annihilate the "mean" for so long a time? As Dr. Granville has gone so deeply into the subject, perhaps he can smooth the way for those who wish to follow him by offering some explanation on these curiosities of genesis.

I am, Sir, yours truly,

Limlade, Nov. 22nd, 1880. WM. STORY.

To the Editor of THE LANCET.

SIR,—"A. G. P.'s" difficulty, as stated in your last impression, would seem to resolve itself into some confusion existing in his mind about mental and physical qualities and the connexion between them in an individual, or else his language fails to give both himself and others a full grasp of his real meaning. Thus observation leads us to the conclusion—

1. Quite as much as sexes differ, so do minds, even in the same family, and minds will copy any model set before them.

2. Physical qualities of one parent may descend to children, or the physical qualities may be a compound of both, or may be qualities quite distinct from those of either of the parents, but in the latter case there is always one very distinct peculiarity which indicates how the exception arises.

3. A governing principle being assumed in a mere animal act, it is clear that principle can never be less than duplicate, just as it is impossible to govern mind on one principle.

4. This principle being never less than duplicate in ordinary cases, it is equally clear that where twins are born of different sexes, but with unity of placenta, there must be in such cases at least a third principle involved, as has, in fact, been demonstrated over and over again by those who have satisfied themselves there is nothing more to discover in that direction beyond the fact that mental and physical qualities are quite distinct.

There is nothing, therefore, to answer in "A. G. P.'s" query as far as his meaning can be apprehended. Yours &c.,

Baden-Baden, Nov. 1880. M.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the 82 candidates at the pass examination for the diploma of Membership of the College on the 12th ult., when they were required to answer at least four (including one of the first two) out of the six questions:—

1. Give the relations of the right common iliac artery, and state by what arteries the collateral circulation is established after ligature of that vessel.

2. Enumerate the structures which must necessarily be divided in excision of the scapula.

3. To what visceral complications may severe burns of the skin give rise, and to what stage of the case are they most likely to appear?

4. What is spina bifida? Describe the anatomy of the deformity, and the means you would adopt for its relief.

5. Describe the symptoms of a foreign body impacted in the larynx, and state how you would relieve the patient.

6. Describe the formation and treatment of fistula in perineo.

The following were the questions on the Principles and Practice of Medicine submitted on the following day to those candidates who had not passed a recognised medical examination:—

1. Give the symptoms, course, complications, and treatment of acute rheumatism.

2. Describe the symptoms and course of tubercular meningitis. Note the distinctions which separate it from the diseases which clinically resemble it, and mention the appearances commonly met with after death from this cause.

3. State the effects, preparations, and doses of digitalis, elaterium, colchicum, acid tartrate of potash, and perchloride of mercury.

A POET'S LAMENT.

A WRITER of considerable merit, Xavier Aubryet, died in Paris on Monday, the 15th November, of locomotor ataxia. He had suffered for the last six years from the disease in its severest form. Some time back he published a book which was written towards the beginning of his illness, entitled "La Maladie à Paris," and he had intended to publish a work written afterwards, and which he considered to be his *chef d'œuvre*; but the progress of the disease had deprived the author of his sight, and none of his friends could decipher the handwriting. The *Figaro* in its obituary notice gives the following verses, which were written by Aubryet to describe his sufferings:—

LE VIOLON DE DIEU.

Quel Stradivarius pour la douleur physique
Que l'étrange instrument qu'on nomme corps humain!
C'est Dieu qui pour lui seul compose sa musique,
La main qui tient l'archet, c'est sa terrible main!

Quelles vibrations que nos cris de souffrance!
Quelles cordes d'un jeu tout-puissant que les nerfs!
Désespoir, pour trouver toute la résonnance,
Les bois les plus fameux valent moins que nos chairs!

Quelle gamme sans fin de la plainte uniforme!
Quel dessin de douleurs sur des thèmes mortels!
Comme ils vous envieraient, les maîtres de la forme,
Pizzicati sanglants et points d'orgue cruels!

Elle a trois clefs aussi cette musique noire:
Dans le mal au début, la *clef du purgatoire*,
Quand il est sans espoir, c'est la *clef des enfers*,
La *clef du Paradis* quand la mort rompt ses fers!

XAVIER AUBRYET.

"THE CHLOROFORM DEATH-BILL FOR TWELVE MONTHS."

To the Editor of THE LANCET.

SIR,—Under the above heading, in THE LANCET of the 6th instant, Dr. Jacob of Leeds reports twenty-five deaths from chloroform during the past year. He names the operation in twelve cases, and certainly there is reason for the remark that the operations were of the simplest kind. Anyone who has interested himself in the cases of death from chloroform, reported from time to time, must have been struck with the frequent occurrence of fatal results in what are usually called "simple operations." As far as I have observed, the largest number of deaths have occurred during extraction of the toe-nail, extraction of teeth, and operations on the eye. Now, these are frequently, I may say almost invariably, performed while the patient is *sitting upright*, or, at all events, not in a recumbent position. This, I believe, more than any other cause will explain the many deaths during "simple operations." In the twelve cases cited by Dr. Jacob, any of them, with the exception of excision of the breast, might have been, and probably were, performed whilst the patient was sitting upright.

There are very few operations, if any, which may not be performed while the patient is lying down, and it seems to me that an unnecessary risk is run when chloroform is administered in any other position. My personal experience in the administration of chloroform does not go beyond 2000 cases. I have never had an accident, and, for the last twenty years, have made it a rule never to administer it unless the patient be in the recumbent position. The only cases in which I have observed the anæsthetic produce anything like dangerous symptoms were in excision of the eyeball. I suppose that this fact has been observed by other surgeons. I am, Sir, yours truly,

Florence, Nov. 13th, 1880. G. DODS.

A CHANGE IN THE WIND.

THE Holborn guardians, according to the *Metropolitan*, have discovered that the patients in their infirmary sell the spirits served out to them as medicine. Commonly the complaint is that the poor too often turn what money they can get into drink; but in this case they turn drink into money. What they do with the latter may be a question of some interest. In other words, what for them has charms superior to those of drink?

Dr. G. Stanley Murray.—Our correspondent takes, it seems to us, a sensible view of the matter, and expresses it in terms so reasonable that we do not care to do more than assure him of our concurrence. Such qualities should be used in an unselfish way for the gratification of others, and, provided the use of them is not allowed to interfere too much with professional work and that scant leisure for study which keeps a man abreast of his art, it cannot be too highly commended. Some very distinguished members of our profession have so used "the gift that was in them."

Fairplay should address his complaint to those whom he holds to be responsible for the *ideke*.

C. should consult an analytical chemist.

Dr. Ridpath should write again. His former letter has probably miscarried.

TONGA.

To the Editor of THE LANCET.

SIR,—I have by the last mail received from Dr. Bancroft, of Brisbane, some information respecting "tonga," a medicine used for neuralgia, which I think will interest many of your readers.

"Mr. Christy having been making inquiries about the remedy for neuralgia called 'tonga,' obtained from Fiji, and by the kindness of his botanical friends has ascertained that a gentleman who lived on one of the Fijian Islands, away from all medical assistance, was for years a martyr to neuralgia, and unable to find any remedies to give him relief. In this hopeless condition he began to try the leaves, bark, fruit, and roots of every plant that grew wild on the island where he was living. He pounded the leaves &c., mixed them with water, used the preparation externally, and drank it as well. Any of these that gave him relief he placed on one side; still he kept on trying various plants. At last he had three or four remedies, each of which afforded him partial relief, and when the whole of these were mixed the effect was magical. He refused to give further information as to the plants, except that the 'tonga' is a combination of several, bark of one, leaves and roots of others. He wishes to make what profit he can by the sale of his remedies. He is a German, and unacquainted with botany. He and a friend who introduced the medicine in England are the only persons who know the composition of the tonga remedy."

I have omitted the names from the above letter, as one of the party is very ill, and the other is only the party who forwards the article. The question will naturally arise, How could any man unacquainted with the plants on a tropical island arrive at such a happy result as tonga appears to give? If it is correct, which has been surmised, that one of the parties married the daughter of a Chief, nothing would be more natural than that the medicine-men among the Indians should be instructed to search for certain drugs, known perhaps only to themselves, which gave relief, then by combining those which appear to answer best, the composition "tonga" may have been easily arrived at. This report bears out the opinion of some scientific men who examined for Messrs. Hanbury and Co. the composition of the small bags the tonga came over in. They have decided there are certainly more than one variety of plant, root, or stem in each bag.

Dr. Bancroft, who is known to have carefully studied the native drugs in Australia, sends me some other information respecting "Alstonia constricta," which he has used in the hospital for ten years. He says: "I make into tincture of alstonia two ounces of bark to twenty ounces of proof spirit; one or two drachms in half a pint of water gives a fluid scarcely to be distinguished from solution of quinine. I have also used it in my private practice for a similar period, and still use it. I have poured some tincture into a tumbler with water, and asked old experienced surgeons if they knew what it was. They invariably said 'quinine?' I am sure there is a large future for this valuable drug, the bark of which can be got at such a low price in this country, and I think it is a pity medical men do not use it more generally in England. I am glad to hear that in America the demand for the alstonia is daily increasing."

Dr. Bancroft has also sent by this mail some pounds of pituri leaves.

Yours truly,

Nov. 27th, 1880. THOS. CHRISTY, F.L.S.

T.—See the Home Hospital, Fitzroy-square, and visit the Parkes Museum of Hygiene, University College. In the first place, our correspondent will get all the knowledge he requires if the hospital he is interested in is *within* a sewered district; in the second place, he will probably learn all he needs if the hospital is situated *outside* a sewered district.

Mr. Gillespie.—Thanks.

THE following paragraph appeared in the *Daily Telegraph* of the 19th ult. Comment is superfluous:—

"MEDICAL. — Wanted, a Diploma (registerable). — Address, Mr. ——, ——."

Mr. L. Newton.—Attendance is generally expected, and when, as usually happens, the magistrate is not a medical man, it seems expedient.

"WANTED, A DIAGNOSIS"; GIVEN, A SUGGESTION.

To the Editor of THE LANCET.

SIR,—Your correspondent, "L.R.C.P.," probably has to deal with a gouty kidney.

I will give an illustrative case. It is that of a distinguished and highly honoured member of our profession, who had practised most successfully for many years in one of our larger West Indian colonies, and who died recently in this country, after a well-earned retirement of about four years' duration. I had attended him along with other medical men for many years in the Greater Antilles. He was subject to most frightful attacks of inherited gout. During the attacks his urine was invariably non-albuminous. At all other times (for he regularly examined it himself) it was highly albuminous. Being a man of great power of will, and of indomitable courage and energy, he was intensely annoyed by the frequent interruptions caused to a large and lucrative practice by these attacks of gout, and at length resorted to "Leville's drops"—a mode of treatment much affected by the French residents of these regions. The effect of that "secret" medicine (said to contain veratria) was simply marvellous so far as concerned the usual gouty manifestations. These consisted of enormous swellings of the knees, ankles, &c., which would shift from the one side to the other of the body in the course of a few hours. He would be able under the influence of "Leville" to go on with his work, visiting from sixty to seventy patients a day, besides doing his consulting-room business. One result, however, was most distressing: Dr. —— has often told me that he purchased the "repression" at a frightful expense mentally, and used to say that after taking his "Leville" he felt in danger of suicide (ordinarily an idea that, owing to his fixed religious and firm moral convictions, could never enter his vigorous mind) unless he "worked it off." At such times his urine would be more densely albuminous than ever; it would solidify in the tube. The patient went on in that kind of way for many years, taking his "Leville" *after* his retirement even occasionally, and having albuminous urine to the last, which happened at the age of sixty-six. He never had dropsy in any form, unless œdema of the lung, towards the end, could be so called.

I submit, Sir, that we have here a case which may help in the elucidation of "L.R.C.P.'s" doubts. If I be right, your correspondent may go straight through the Pharmacopœia, adding to the formidable array of drugs stated as already tried until he has tried them all; but he will not influence the albuminous condition of the urine unless a regular gouty attack should in some way or other be manifested or brought about. Again, the albuminuria having, it is stated, existed for so long a period as four years, without the occurrence of such symptoms as usually happen within that time, in Bright's disease, I think that actual nephritic change may be eliminated from the diagnosis. It is not improbable that the occurrence of the "fit" twelve years ago betokened the starting point of something, seeing that it occurred at an age when, in my experience, the gouty tendency sometimes shows itself somehow—in dyspepsia for example,—particularly if a predisposed person have not been careful in his mode of life; nor is it out of the bounds of probability either that the albuminuria may have existed unnoticed all these years. But we have no positive evidence either way as to this. Moreover, it seems to me that the eruption of acne and the "warm feeling across the lumbar region" show that a *materies morbi* of some kind has, and is, trying to eliminate itself.

There remains the question of syphilis, stated to have been contracted some years ago. In my experience, syphilitic albuminuria, so to call it, for I have often seen it, yields either to iodide of potassium or to mercury cautiously given, so that this, too, may perhaps be put aside.

It would be out of place here to offer any suggestions as to treatment, which indeed are not asked for; but if my hint should lead to anything, I shall be happy to write to "L.R.C.P." privately, through you, if he wishes.

Yours truly,

Shaldon, Nov. 1880. M.D.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent in your issue of Nov. 20th, I look upon his patient's case as one of latent gout, and would consequently advise that he give him a little colchicum for a week or two, carefully watching its effects upon the system; and would suggest the following mixture:—Carbonate of ammonia, forty grains; bicarbonate of soda, one drachm and a half; tincture of colchicum seed, two drachms; syrup of oranges, four drachms; water to eight ounces: one-eighth part to be taken twice daily (at 11 A.M. and 4 or 5 P.M.) Let him abstain from alcohol for a fortnight, taking meat once a day and fish once a day, and I prognosticate that at the end of a fortnight his morbid sensations will vanish, as well as the albumen from the urine. A warm bath might aid in the cure.

Yours truly,

Earl's-court-road, W., Nov. 22rd, 1880. E. MAY, M.R.C.P.

To the Editor of THE LANCET.

SIR,—If "L.R.C.P." can refer to Niemeyer's Medicine, he will see at once that his case is one of chronic Bright's disease. The treatment recommended is: Give plenty of protein substances, as soft boiled eggs, strong meat broths, roast beef, &c., in as large a quantity as the patient can digest; a moderate quantity of beer or good wine; quinine and iron mixture. Sometimes an exclusive milk diet is successful. Hot baths and cream of tartar and Dover's powder are also often of use. Avoid squills, cubebs, copaiba, and other irritating diuretics, also ardent spirits.

Yours truly,

Hayward's Heath, Nov. 22nd, 1880. A. H. NEWTH.

THE ANTIGUA WEEKLY REGISTER.

THE case seems to have been one of placenta prævia; but we cannot comment on it without more particulars than are contained in the newspaper report. It is to be greatly regretted that a medical man did not go to the assistance of the midwife.

Mr. William Bund.—Apply to one of the hospitals for the relief of nervous diseases.

Mr. Roger Williams.—The paper will appear in an early number.

FISH-EATING AND LEPROSY.

To the Editor of THE LANCET.

SIR,—In your issue of the 6th instant you publish a letter from Mr. Jonathan Hutchinson, in which he contests Mr. Startin's conclusion that, in the case of leprosy recorded by him in your number of the 30th ult., the disease could not in that case be considered due to a fish diet, and states "that I have not seen a single instance of leprosy in which the fish hypothesis was impossible; nor do I know of a single district where the facts, when sifted, are strongly opposed to it"; and he concludes by asking for particular information as to leprosy in certain districts of India.

I cannot give him the information as to those districts; but I can give some as to another district in India which bears upon the point under discussion, and appears to me strongly opposed to the "fish hypothesis." At Bangalore, the principal military and civil station in the Mysore territory, with a population of over 120,000, leprosy is by no means uncommon among all classes of the native population, inclusive of Brahmins, whose customs in that part of India as to diet are so exclusively vegetarian as to completely exclude the use of fish; eating it would involve pollution and expulsion from caste. Having held medical charge of the civil hospitals on the station for over ten years, I can say that I have seen there a good many Brahmins affected with leprosy.

I am, Sir, yours &c.,

J. KIRKPATRICK, M.D.,
Retired D.S.G., Madras Establishment.

Edinburgh, Nov. 11th, 1880.

APPLICATION OF CALOMEL DUST IN THE TREATMENT OF PTERYGIUM.

To the Editor of THE LANCET.

SIR,—The treatment of pterygium by calomel dust was frequently adopted by Mr. Henry Power at the Royal Westminster Ophthalmic Hospital as far back as 1870, during the tenure of my house-surgeoncy under that gentleman. The treatment appears to be new in Tokio, but it is not in London. Calomel and quinine dust used by Mr. Power proved to be exceedingly efficacious in some cases, especially in those of debility. Quinine, calomel, oxide of zinc, &c., are valuable in pterygium, corneal opacities, granular lids, and all such pathological states.

I am, Sir, yours obediently,

Staines, Nov. 22nd, 1880. P. W. DE LA MOTTE, M.R.C.S. Eng.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayrer, London; Mr. W. Rivington, London; Dr. Sharkey, London; Dr. Thin, London; Dr. Pick, London; Mr. Sawyer, Shaftesbury; Mr. Thornton, Margate; Mr. Wyndham; Dr. Hine, Sheffield; Mr. Lupton, London; Dr. D. J. Mackenzie, Glossop; Mr. Messenger; Dr. Fogerty, Meerut; Mr. Harris, Royapooram; Mrs. Hopwood, London; Dr. C. E. Saunders, London; Mr. Priestley, London; Dr. Alder Smith, London; Mr. Baker, London; Dr. Maclaren, Carlisle; Mr. Colville Brown, Berwick-on-Tweed; Mr. Rendle, London; Dr. Day, London; Mrs. J. Stewart; Dr. Hermann; Messrs. Domecq and Co.; Mr. R. H. Carpenter, London; Mr. J. Liddle, London; Mr. R. L. Williamson, Wakefield; Mr. Mason, Burton-on-Trent; Dr. Ackman, Guernsey; Mr. T. C. Eager, Woking; Dr. Mundie, Hessle; Mr. Tickle, Liverpool; Mr. Newton, Huntingdon; Dr. Phipson, Putney; Dr. Young, Edinburgh; Dr. Rae, Blackburn; Mr. Cooper, Needham Market; Mr. Christy, London; Mr. Gunning, Hounslow; Mr. Durrant, Ipswich; Mr. F. Mason, London; Mr. Dyer, Ringwood; Dr. Dale, King's Lynn; Mr. Stalkwill, London; Dr. Low, Helmsley; Dr. Harrison, Newland; Mr. Willett, London; Dr. Wilson, Hornby; Mr. J. Marshall, London; Dr. Gramshaw, Gravesend; Dr. Thomas, Sheffield; Mr. Appiebe, Hay; Dr. Cameron, Glasgow; Dr. Curran, Warrington; Dr. Slade-King, Ilfracombe; Dr. Lowe, Lynn; Dr. Finlay, London; Dr. Morris, Spalding; Dr. R. Shingleton Smith, Clifton; Dr. Eade, Norwich; Dr. O'Dwyer, Shorncliffe; Dr. Dyson, Sheffield; Mr. Withington, Doncaster; Mr. T. Smith, London; Dr. Jacob, Leeds; Mr. Blackburn, Barnsley; Dr. Taylor, Trowbridge; Dr. Allchin, London; Dr. Lloyd Roberts, Denbigh; Mr. Newhouse, London; Messrs. Smith, Elder, and Co., London; Mr. Hesson, Liverpool; Dr. Hine, Londonderry; Mr. Clouting; Mr. Fieldson, Norwich; Mr. Gulliver, London; Mr. Ransford; Dr. Meymott Tidy, London; Mr. Duncan, Vieux Fort; Dr. Lediard, Carlisle; Dr. Snow, London; Dr. Naismith, Ayr; Mr. MacDowall, London; Mr. Higginbottom, Glasgow; Mr. Davidson; Mr. Clarke, Bodmin; Mr. Capestake, Derby; Dr. Pye, London; Dr. Crocker, London; Mr. A. E. Barlen, London; Mr. Haviland, Northampton; Dr. Robertson, Buxton; Dr. Meade, York; Dr. Mitchenson, Lincoln; Mr. H. P. Smith, Shepton Mallet; Dr. Pratt, Newtown; Mr. Baker, Derby; Dr. W. S. Walker, Hanley; Mr. Jessop, Leeds; Mr. Gaylor, Belper; Dr. Ferguson, Cheltenham; Messrs. Argyle and Sons, Tamworth; Mr. Alexander, Glasgow; Dr. Sephton; Mr. Hodgkins, Oxford; Dr. Finch, Salisbury; Mr. Stilliard, Birmingham; Messrs. Harvey and Reynolds, Leeds; Dr. Woolfryn, Portsmouth; Mr. Barton, London; Dr. Lawton, Poole; Mr. Fowler, Epping; Dr. Mackinnon, Netley; Dr. Balthazar Foster, Birmingham; Dr. Munro, Kilmarnock; Dr. Strange, Worcester; Mr. Faris, Aldershot; Dr. Russell, Birmingham; Mr. Shuttleworth, Lancaster; Mr. T. Bryant, London; Mr. Williamson, Ventnor; Mr. Winter, Wolverhampton; Mr. Nunn, London; Messrs. Marston, Birmingham; Mr. Savory, London; Mr. Ash, Holsworthy; Mr. E. Barnes, Epe; Mr. Brodhurst, London; Mr. Munro, London; Dr. Donkin, London; Dr. J. Pollock, London; Mr. S. C. Smith, Halifax; Dr. Bantock, London; Dr. Cook, Manningtree; Dr. Wilson Fox, London; Dr. Pitman, London; Mr. Spencer, London; Sir Thomas Watson, London; Mr. Clement Lucas, London; Dr. Ryding, Neath; Dr. Matthews Duncan, London; Dr. S. Thomson, Westgate; Dr. Hughlings Jackson, London; Dr. Roper, London; Mr. J. K. Thornton, London; Mr. B. Hill, London; Mr. Cowell, London; Mr. W. Haward, London; Mr. J. A. Morris, Caerleon; Mr. A. Lloyd; Dr. W. Walter, Manchester; Dr. Balmanno Squire, London; Dr. Whipham, London; Dr. J. Harley, London; Mr. J. H. Potter; Mr. J. Beale, London; Dr. Neale; Esprit de Corps; A Searcher after Truth; M.; M.B.; Fairplay; An English Graduate; C. L. K.; F.; H. R. H.; M.B., M.A.; W. X. Y.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Kearney, Caddishead; Mr. Dane, Wansford; Mr. Young, Bridgwater; Mr. Blatchley, London; Dr. Dickinson, Gillingham; Messrs. Smith and Son, Birmingham; Mr. King, Leeds; Mr. Thomas, Manchester; Mr. Gasquet, Burgess Hill; Mr. Bridgman, Barnstaple; Mr. Munday, Greenhill; Messrs. Hyde and Tayler, London; Dr. Peirce, Hoylake; Physician; Millgate; Medicus, London; M.D., Strand; M.R.C.S., Barton-under-Needwood; A. B., Worcester; Medicus, Scarborough; Medicus, Earl Soham; P. J. B.; Alpha, London; Æsculapius; C. P., Truro; Fideliter; E. J.; M.; M. O. H.; G. W. N., Stratford; &c.

Daily Courier, Chemists' Journal, Teacher, Concours Médical, Boston Medical and Surgical Journal, Medical Record, Southampton Times, Jamaica Gazette, Weekly Gazette, Nottingham and Lincoln Gazette, El Medico y Cerujano Centro-Americano, Anti-Compulsory Vaccination Reporter, Journal of Medicine and Dosimetric Therapeutics, L'Egypte, Braintree and Bocking Advertiser, Specialist, Indian Medical Gazette, Vanity Fair, Cafes Public-house News, Erienes, Preston Guardian, Hecknondwike Reporter, Estates Roll, Church of England Temperance Chronicle, &c., have been received.

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